BOSTON MEDICAL LIBRARY IN THE FRANCIS A. COUNTWAY LIBRARY OF MEDICINE

The "Man-Trunk."

(With Illustrations.) See page 153.

HEALTH

A WEEKLY JOURNAL OF

DOMESTIC AND SANITARY SCIENCE.

"Reason's whole pleasure—all the joys of sense—
Lie in three words, HEALTH, PEACE, and COMPETENCE."—*Pope.*

EDITED BY DR. ANDREW WILSON, F.R.S.E. &c.

VOL. XII.—No. 296. FRIDAY, DECEMBER 7, 1888. [PRICE TWOPENCE.

PROTECTION FROM FIRE.

Bryant & May's

Safety Matches

PATENT 13 PRIZE MEDALS.

Contain no Phosphorus. Are not Poisonous. Harmless to those employed in their manufacture.

PROTECTION TO HEALTH. SOLD EVERYWHERE.

ROWNTREE'S "Elect" Cocoa

"HEALTH" says:—
"This is a very admirable Cocoa Extract. . . . .
". . . A careful analysis shows that it is a pure
"article, exhibiting the proper proportions of
"nitrogenous or flesh-forming principles. . . . . .
"A valuable food."

THE COCOA WORKS,
YORK, ENGLAND.

EAU DES SIRÈNES.

THE GREATEST SUCCESS OF THE PARISIAN AGE,
Will Restore white or grey hair to its original colour without causing any injury to the hair or the skin.
IS NOT A DYE!
DOES NOT STAIN LINEN! DOES NOT MAKE THE HAIR STICKY!
Has every possible advantage over all other preparations of the kind. Every Shade can be obtained.

SOLE DEPÔT IN ENGLAND:
THE FRENCH HYGIENIC SOCIETY,
6, CONDUIT-STREET, LONDON, W.

GENERAL NURSING INSTITUTE,
5 & 4, HENRIETTA-STREET,
COVENT GARDEN, LONDON, W.C.
Established 1862.
Solely under Medical Direction.
HOSPITAL TRAINED NURSES for every description of disease—MEDICAL, SURGICAL, MENTAL, and MIDWIFERY—can be obtained at this Institute on application to the Secretary or Lady Superintendent at a moment's notice, being resident in the Home.
MALE ATTENDANTS and NURSES specially for FEVER cases.
Telegraphic Address—
"NURSING INSTITUTE, LONDON."

"GLAD TIDINGS."

"The INHALATION OF 'SANITAS' VAPOUR

is especially valuable in RELAXED SORE THROAT, in DIPHTHERIA, in NASAL CATARRH, in OZŒNA, in ASTHMA, in BRONCHITIS (particularly the chronic form), in PNEUMONIA (greatly diminishing the offensive odour of the breath and sputa), in PHTHISIS, and in ALL INFECTIOUS DISEASES.

One Advantage of the 'Sanitas' Fumigator

is that the atmosphere of the patient's room can be kept constantly charged with the 'Sanitas' Vapour, so that the patient can continue to breathe the soothing healthful fumes for any period that may be desired."—WILLIAM ABBOTTS, M.D., M.R.C.P., and M.R.C.S., London.

"SANITAS" OIL in 1/- bottles. "SANITAS" FUMIGATORS, 3/6 each.
"SANITAS" LOZENCES, 1/½ per box, are also strongly recommended to all who suffer from Throat Complaints. Of all Chemists, and
THE "SANITAS" COMPANY Limited, Letchford's-buildings, Bethnal Green, E.,
Sole Manufacturers of the "Sanitas" (Gold Medal and Non-Poisonous) Disinfecting Fluids, Powders, and Soaps.

HENDERSON'S Perfect Food Biscuits

THE MOST NUTRITIOUS AND EASILY-DIGESTED BISCUITS MADE.

Very highly recommended by the Medical Faculty for their easy digestibility.

HENDERSON'S Perfect Food Biscuits

INVALUABLE to Persons of WEAK DIGESTION.

Lancet says:—"They are excellent in quality and flavour. We can speak of them in terms of unqualified praise."

British Medical Journal says:—"They are particularly rich in albuminoids, most palatable and nutritious."

Health says:—"For the relief and cure of digestive ailments they should prove highly valuable."

The Queen says:—"They are undoubtedly pleasant to eat."

They are unrivalled as Lunch Biscuits.

May be had from any Grocer, in Tins containing nearly 3 lbs., 2s. 6d. each, free by post from the Sole Manufacturers:—

SIMON HENDERSON & SONS, EDINBURGH.

SAMPLES SENT GRATIS ON APPLICATION.

Wholesale Agents:—WILLIAM TAYLOR & SONS, 4, Elm-row, Edinburgh.

PITKEATHLY.

EXTRACT FROM A SERMON BY THE REV. DR. TALMAGE, ON SEPTEMBER 25th:—

The invalid proprietress of a wealthy estate in Scotland visited the Continent of Europe to get rid of her maladies, and she went to Baden-Baden and tried those waters, and went to Carlsbad and tried those waters, and went to Homburg and tried those waters, and instead of getting better she got worse, and in despair she said to a physician, "What shall I do?" His reply was: "Medicine can do nothing for you; you have only one chance, in the waters of Pitkeathly, Scotland." "Is it possible?" she replied. "Why those waters are on my own estate!" She immediately returned, and drank of the fountain at her own gate, and in two months completely recovered.

To be had of all Wine Merchants and Chemists.

REID & DONALD, Perth, Proprietors.

LONDON AGENTS:

MESSRS. W. BEST & SONS, 22, HENRIETTA-STREET W.

REMINGTON

STANDARD TYPEWRITER

STILL AHEAD! SPEED CONTESTS.

CINCINNATI, July 25—Highest Speed on Legal Testimony.

NEW YORK, August 1—**First, Second, Third, and Fourth Prizes** on Business Correspondence.

TORONTO, August 13 (Tournament for CHAMPIONSHIP of the WORLD).

GOLD AND SILVER MEDALS for Highest Speed ever recorded on Business Correspondence and Legal Testimony—99 Words per Minute, excluding errors.

SOLE PROPRIETORS AND MANUFACTURERS—

WYCKOFF, SEAMANS, & BENEDICT,

100, GRACECHURCH-STREET, E.C.

GLYCERINE—CODEIA JUJUBE,

WITH RED ORANGE JUICE,

A DELICIOUS AND EFFICACIOUS REMEDY FOR

THROAT IRRITATION AND DRY COUGH,

Gives great relief in Consumption and all Chest and Throat Affections.

Boxes, 1s. and 2s. 6d.; by post, 2 stamps extra.

TYLEE & CO., 7, BRIDGE-STREET, BATH.

ADVERTISEMENTS IN "HEALTH."

TARIFF PER INSERTION.

Whole Page	£5 5 0
Half Page	2 12 6
Quarter Page	1 6 6
Eighth of Page	0 13 6

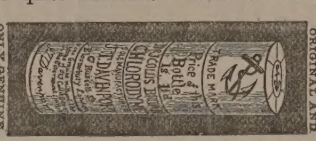
Smaller Spaces *pro rata*.

OFFICE: 2, PATERNOSTER-SQUARE, LONDON, E.C.

COUGHS, COLDS, ASTHMA, BRONCHITIS and NEURALGIA.

Dr. J. Collis Browne's CHLORODYNE.

A few doses quite effectual. — Caution. — The extraordinary medical re- efficacy of ance that the obtain the which is pro- Government ing the words



ports on the Chlorodyne vital import- public should genuine, tected by a stamp, bear- "Dr. J. Collis Browne's Chlorodyne." See decision of Vice-Chancellor Sir W. Page Wood, the *Times*, July 16th, 1864.

Numerous testimonials from eminent Physicians accompany each bottle. **Sold in Bottles, 1s. 1½d., 2s. 9d., & 4s. 6d., by all Chemists.**

THE ENCORE WHISKY.
Lancet.—"Wholesome and pleasant."

THE ENCORE WHISKY.
British Medical Journal.—"A safe stimulant."

THE ENCORE WHISKY.
Medical Times.—"Very wholesome. May be safely used."

THE ENCORE WHISKY.
Medical Press.—"Invaluable as an alcoholic stimulant."

THE ENCORE WHISKY.
Medical Record.—"The purest of alcoholic stimulants."

THE ENCORE WHISKY.
Sanitary Record.—"An excellent 'dietetic' stimulant.'

THE ENCORE WHISKY.
Practitioner.—"A safe stimulant."

THE ENCORE WHISKY.
Food Reformer.—"All who value health should use it."

THE ENCORE WHISKY.
Dr. Bartlett.—"Purest whisky I ever examined."

THE ENCORE WHISKY.
Dr. Paul.—"Free from all injurious substance."

THE ENCORE WHISKY.
Dr. Tichborne.—"Wholly free from all impurities."

THE ENCORE WHISKY.
Dr. Macadam.—"Very wholesome and fine quality."

Sold Everywhere.

BERNARD & CO., LEITH DISTILLERY, SCOTLAND.
Wholesale Depôt—THREE CROWN-SQUARE, BOROUGH, S.E.

◆ HEALTH ◆

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, DECEMBER* 7, 1888.

CONTENTS OF No. 296.

	PAGE
Notes by the Way: By the Editor.	145
Original Essays:—	
The Electric Light and its Relations to Health	146
The Chemistry of the House. By Dr. Drinkwater, F.C.S. Tenth Paper	147
Personal Health:—	
The Throat and Lungs	149
The Proper Number of Vaccination Marks	149
The Family Circle:—	
The Peculiarities of Childhood in Disease	150
Public Health:—	
Popular Errors about Contagious Diseases	151
Calcutta and Cholera	152
Popular Science Papers:—	
The "Man-Trunk"	153
Jottings from the Journals:—	
Age and Disease—The Indian Woman's Life—Polyandry—Music in Medicine	155-156
Sanitary Appliances, &c.:—	
Messrs. Pulvermacher's Galvanic Appliances	157
Our Letter Box:—	
Rules for Correspondents	157
Letters to the Editor—Saccharin	157
Queries and Answers:—Replies: General, Sanitary, and Medical	158

Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

NEXT week's issue of HEALTH, as already announced, will form our CHRISTMAS NUMBER, and will contain an interesting instalment of fiction by well-known writers, as well as seasonable articles and contributions on various subjects. I trust our Christmas issue for 1888 will receive the same kindly welcome which greeted its predecessors.

✣ ✣ ✣

A FRENCH *savant* has been making researches into the characteristic odours of the flesh of animals. The examination of the flesh of animals, from which the organs have been removed, necessitates the analysis of all the tissues, the inspection of the fat, muscular tissue, fasciæ, pleura, and peritoneum, spinal cord, glands, vessels, blood, &c., before the meat can be accepted. In the healthy state, the flesh of every animal has its own characteristic odour. Beef has a special insipid kind of smell, modified by the different modes in which the animals have been fed. Thus it is stated that the flesh and milk of cattle in the Polar regions have a fishy odour, because the absence of pasturage obliges the inhabitants to feed their oxen and cows on fish. Veal smells of milk, mutton of wool and sometimes grease. The normal odour of pork is insipid and inoffensive, but when pigs are fed on offal the flesh has a pale cachectic hue, and an offensive smell and taste.

✣ ✣ ✣

THE odour of poultry fed on corn differs from that of poultry artificially fattened. In a diseased state, meat emits a typical odour resembling the breath of feverish patients. This odour is particularly noticeable beneath the shoulder, and in the muscles of the inner side of the leg. The odour should be carefully noted immediately after the incision is made. This should be done by the inspector himself. When diseased meat is roasted, it emits a strong and offensive smell. The fever odour is particularly marked in the case of animals which have suffered from peritonitis, charbon, morbid symptoms following parturition, or with ordinary acute disease. In such cases the smell is recognizable at once, and it is unnecessary to make any incision. "Feverish" meat is always unfit for consumption, on account of the leucomaines which it may contain. Moreover, there always exist marks of disease which denote clearly that the animal was unhealthy before being killed.

✣ ✣ ✣

ATTENTION is being called by Dr. Roose to some mistakes concerning deodorizers and disinfectants. It is simply useless, he says, to place saucers containing chloride of lime, carbolic acid, &c., in a contaminated atmosphere. For deodorizing in sick rooms and passages Dr. Roose thinks euchlorine gas very efficient—produced when a few crystals of chlorite of potassium are dropped into a little hydrochloric acid; bromine is even more powerful as a disinfectant than chlorine, and both are far superior to sulphuric acid or carbolic acid. This is, of course, old teaching in the matter of heath-science; but it is none the worse for an occasional re-ventilation in a lay periodical.

✣ ✣ ✣

AT a recent meeting of the Académie de Médecine, I observe M. Chervin made a communication concerning the number of children per family in France according to the last census taken. Twenty married couples per cent. have no children, 24 per cent. have 1 child, 22 per cent. have 2 children, 15 per cent. have 3 children, 9 per cent. have 4 children, 5 per cent. have 5 children, 3 per cent. have 6 children, 2 per cent. have 7 or more children. On an average there are 259 children to 100 fertile marriages. This small proportion would explain the small increase of population in France.

CARLSBAD NATURAL MINERAL WATERS,

"SPRUDEL," "SCHLOSSBRUNNEN," "MUHLBRUNNEN,"

Obtained from these celebrated Alkaline and Saline Springs and famous health resort.

THESE Waters are now imported in bottles and may be used in the treatment of all cases in which the Carlsbad cure is indicated when patients are unable to visit the Spa. The Carlsbad cure is recommended in CHRONIC GASTRIC CATARRH, HYPERÆMIA OF THE LIVER, GALLSTONES, CHRONIC CONSTIPATION, DIABETES, RENAL CALCULI, GOUT, and Diseases of the Spleen arising from residence in the tropics or malarious districts.

NATURAL CARLSBAD SPRUDEL-SALT

contains all the essential ingredients of the CARLSBAD "SPRUDEL" MINERAL WATER, from which it is obtained by evaporation. It is alkaline, and readily soluble either in warm or cold water. In small and frequent doses it is an efficient *diuretic*, but as an *aperient* it should be taken *before breakfast*, in doses of from one to two teaspoonfuls, dissolved in warm water. To increase the *aperient* action of the Natural Carlsbad Mineral Water, a teaspoonful of the Salt, previously dissolved in a little hot water, should be added.

SOLE IMPORTERS: INGRAM & ROYLE, LONDON, LIVERPOOL, AND BRISTOL.

AND OF ALL CHEMISTS.

THE departments in which th - fewest children are born may be classed in four groups: in the north-west, the Orne, the Calvados, Eure, Seine-et-Oise, and Seine; in the north-east, the Aube and Côte d'Or; in the south-west, the Charente-Inférieure, Gironde, Lot, Lot-et-Garonne, Gers, and Tarn-et-Garonne; in the south-east, the Gard, and Bouches-de-Rhône; in the centre, the Indre-et-Loire and Rhône. The number of children in these departments is from 200 to 228 per 100 families. The greatest number of children are born in Brittany, Poitou, Savoy, &c. The proportion is about 285 to 340 per 100 families.

✣ ✣ ✣

DURING last September 121 persons were treated for rabies at the Pasteur Institute; of this number 16 were bitten by animals in which the existence of rabies was experimentally proved, 75 were bitten by animals in which the affection was proved by veterinary examination, 30 were bitten by animals which were supposed to be attacked by rabies. In the following case the patient, a man of sixty-five, succumbed after the treatment. He was bitten by a dog on September 12th above the right eyebrow; a piece of the skin, measuring 1 centimètre by 4 centimètres, was torn off. Two other bites were inflicted on the forehead, a scratch on the left forearm, and one on the right leg. The patient was treated from September 12th to October 3rd.

✣ ✣ ✣

ON October 6th he complained of pain in the cicatrix on the eyebrow and headache, On the eighth there was formication, especially in the right portion of the skin of the cranium and face. The patient could not sleep, and complained of pains in the limbs. On the 10th slight hydrophobia and aërophobia appeared, and increased in intensity until the 11th. The patient was greatly excited. He expired on October 11th at the Hôpital Broussais. The rabic symptoms appeared three days after the treatment was suspended. Inoculations were made with the medulla oblongata of the dog which had inflicted the bites; these inoculations, introduced into the eye, determined rabies in twelve animals.

✣ ✣ ✣

DRS. STEVENSON and Wooldridge of Guy's Hospital sum up their researches on saccharin and its utility as follows: We conclude that (1) saccharin is quite innocuous when taken in quantities largely exceeding what would be taken in an ordinary dietary; (2) saccharin does not interfere with or impede the digestive processes when taken in any practicable quantity; and (3) our personal experience is that saccharin may be taken for an extended period without interfering with the digestive and other bodily functions. Hence there is no reason to think that its continued use is in any way harmful. This expression of opinion should finally settle the question of the harmlessness of saccharin as a substitute for sugar. A letter on saccharin, from its discoverer, Dr. Fahlberg, appears in the present issue of HEALTH.

✣ ✣ ✣

IN order to test the effect of constant inhalation of dust in flour mills on animals, M. L. Poincarré kept guinea-pigs for two years in the most dusty part of a flour mill—that is to say, the department where the corn is cleansed from all extraneous matter by a special machine before being ground. Of twenty animals, ten remained alive at the end of two years. Those that died were mostly young ones. None of these showed traces of tuberculosis, but lung-inflammation and other ailments were observed in the breathing-system. Dust, consisting of grains of starch, &c., was found, more particularly on the mucous membrane of the nose, but only to a small extent in the tubes of the lungs.

Original Essays

"Life is not to live, but to be well."—*Martial.*

THE ELECTRIC LIGHT AND ITS RELATIONS TO HEALTH.

ELECTRIC Lighting, as a means of preserving and promoting health, has not been sufficiently appreciated by the British public. It may safely be said that the electric light is the only form of artificial illumination which is not injurious to health.

In proof of this, Mr. W. H. Preece, the well-known Post-office engineer, in his recent address to the British Association, stated that, "in the Central Savings Bank in London it has been found, after two years' experience of electric lighting, that the average amount of absences from illness has been diminished by about two days a year for each person on the staff. This is equivalent to a gain to the service of the time of about eight clerks in that department alone. Taking the cost at the 'overtime' rate only, this would mean a saving in salaries of about £640 a year. The cost of the installation of the electric light was £3,349, and the annual cost of working £700 per annum, say a total annual cost of £1,034. The cost of the gas consumed for lighting purposes was about £700 a year, so that on the whole there was a direct saving of something like £266 a year to the Government, besides the material advantage of the better work of the staff resulting from the improved atmospheric conditions under which their work is done."

This is a strong argument in favour of the general introduction of the electric light; but it is when we begin to compare this light with that of gas, or any other artificial lights, that its beauty, purity, brightness, cleanliness, and safety come out in strong contrast. Gas not only consumes and pollutes the air, but is very poisonous, besides having a deleterious effect on the furniture and decorations of our homes. Oxygen being the great life invigorator, the relative quantity of oxygen consumed in a burner giving an illuminating power of twelve standard candles per hour is as follows:—cannel gas, 3·3 cubic feet; common gas, 5·4; paraffin, 6·8; wax candles, 8.4; tallow candles, 12; as against electric light, *none*. Gas gives off a certain amount of soot, which is evident from the blackened ceilings and cornices, discoloured wall-papers, &c. The destruction to goods in the shops of our great cities from the action of gas must also be very great.

That the electric light is eminently adapted for household purposes has been demonstrated over and over again; and when we see all around us in our homes the pure glow lamp replacing filthy gas and odoriferous oil, the atmosphere will be rendered so clear and crisp that in our cities there will be a great gain to our natural health and happiness. When once the plant is fixed the annual cost of running the light will not be found to exceed that of gas; whilst the saving in cost of white-washing, painting, gilding, and redecorating, will yield a fair rate of interest on the capital employed. Centres are being formed in our large cities, from which a number of houses may be lighted, and the cost per house is thus considerably diminished. Among the installations now being carried out may be mentioned that at Bournemouth, under the auspices of the Anglo-American Brush Electric Light Corporation. The advantages of electric lighting are doubtless manifest to the enterprising residents in this popular health-resort. We have no doubt that other

health-resorts will also ere long follow the example set by Eastbourne, Brighton, and Bournemouth, by adopting the electric light, which is certainly not the least attractive feature of those places.

The Anglo-American Brush Electric Light Corporation, Limited, the earliest pioneers of electric light in the country, have done much to advance the cause of domestic electric lighting, the dynamos, lamps, and fittings supplied by them being greatly appreciated. To a great extent theatres are now lighted by electricity, and commenting upon this method of illumination at the Royalty Theatre, Glasgow, which was carried out by the Anglo-American Brush Light Company, in the spring, the *Glasgow Herald* observed that, besides adding greatly to the comfort of the audience, by obviating the disagreeable atmosphere arising from the gas, the new method would reduce the risk of fire to the lowest possible point.

For navigable purposes electric lighting is now extensively used. An interesting and important paper on the "Electric light applied to night navigation upon the Suez Canal" was read before the meeting of the British Association at Bath, on 10th September last, by Mr. R. Percy Sellon, of the Brush Corporation, who stated that to the Suez Canal Company it meant that the capacity of their canal had been rapidly, effectively, and economically increased by nearly fifty per cent., an increase attained without an army of labourers, without a host of dredgers, without a lapse of years, without interruption to traffic. Thereby nearly twenty-four hours, a whole day, were saved, and to a first-class passenger-carrying vessel this represented a saving of £100 to £150.

For vessels of war, where rapid communication between England and her possessions in the Eastern hemisphere, or the scene of her frequent wars in the Soudan or Africa, is by way of the Suez Canal, the saving of twenty-four hours may entail consequences not easy to calculate.

But what a comfort, boon, and sense of security the light is to passengers on board our ocean-going steamers, those only can realize who have travelled in vessels fitted with the electric light as well as in those lighted by other means. The magnificent fleet of the Peninsular and Oriental Steamship Company has been gradually fitted up with the electric light, the "Victoria" and "Britannia" being conspicuous examples of the ship installations by the Anglo-American Brush Light Corporation. Mr. Sellon, whose paper we have already referred to, stated that actually this enterprising firm of contractors had heard from recent advices from the Suez Canal that a particular method of illumination they provided enabled the pilot to see clear as far as 1,600 yards ahead. To the untutored mind such a luminary would appear as little less than a portable moon.

Electric lighting is now being largely applied to our railway trains, an improvement which will be readily appreciated by those, especially in some of our London suburban trains, who have hitherto been accustomed to sit in semi-darkness, inwardly quietly cursing the dim oil-lamp.

The incandescent lamp is admirably suited for purposes of decoration. Some of the finest effects may be produced by placing incandescent lamps among flowers, drapery, and even miniature cascades and Highland glens, and flammable material, without any danger. The great point in procuring an installation is to get the best possible, which is the cheapest in the long run, and there is certainly no risk in employing a company of such world-wide fame as the Anglo-American Brush Light Company, who have been awarded several gold medals, including one at the Health Exhibition in 1883, and who have achieved wonders in the application of electric lighting, not only to all forms of industry, but to institutions of a domestic character.

Looked at from a hygienic point of view, the advantages of the electric light may thus be briefly summed up. In offices, shops, and factories *employés* can use it continuously without feeling the lassitude, headache, and fatigue which are frequently caused by the use of gas. As a means of retaining health its advantages are indisputable.

It has been said, with a considerable degree of truth, that every hour a man spends in a room lighted by gas tends to shorten his life and abridge his powers of work.

The electric light is a pure, healthy light, which, if no other light were used, and the smoke of our fires self-consuming, would leave our cities almost as fresh and bracing as a Highland hill; and rosy, instead of pale cheeks, and brightly-flashing, instead of dim, lustreless eyes, would mark the city inhabitants. No doubt, in time, and that very speedily, there is every reason to hope the public will see the advantage of adopting the electric light, which is the purest and best of illuminants,—the queen of all artificial lights, and the nearest earthly approach to the softness of the moon.

THE CHEMISTRY OF THE HOUSE.

By Dr. Drinkwater, F.C.S., &c.
Lecturer on Chemistry in the Edinburgh Medical School, &c.

TENTH PAPER.

GAS *(concluded)*.

Next in value is the common gas-coal of Newcastle and other parts of England and Scotland; whilst anthracite, a very hard coal which burns with a smokeless flame, is useless for the purpose. It is usual to compare the illuminating value of a gas to a standard candle, and when we say a gas is of fifteen candle-power, we mean that, on burning this gas in a special burner and at a specified rate of consumption, it casts a shadow of the same intensity as fifteen standard candles would. As a general rule, gas, which has a high illuminating power, gains it at the expense of heating power.

The Edinburgh gas has a standard of thirty candles, whilst London gas has illuminating power only equal to sixteen candles. London gas can be used with economy, and is so used for cooking purposes; whilst Edinburgh gas does not give the same advantages. The illuminating power depends, in great measure, on the amount of certain compounds, termed *hydrocarbons*, present. These bodies are composed of hydrogen and carbon chemically united, and burn with a bright flame. By cooling the gas they are condensed to the liquid condition; the result is, that in removing the tar by cooling, a considerable number of these hydrocarbons are taken from the gas, and its illuminating power thereby lowered. Their very nature prevents their being conveyed in pipes to the consumer, because in cold weather they would condense and choke the mains; in fact, to a small extent, this happens even as it is. We must have noticed how poor the light is during intense frost as compared with the luminosity during genial weather.

Some years ago, a company, termed the Albo-Carbon Company, was started, to supply hydrocarbons to the gas-consumer, so that he could increase the illuminating power of his gas at will. To prevent the possibility of condensation, the substance is introduced into the gas immediately before it reaches

the burner. The special hydrocarbon is one called *napthalene*, which is a white solid body. This is placed in a receptacle attached to the burner, the heat from which melts it, and the gas, in bubbling through it, takes up its vapour, which is carried forward to the burner. It is easily managed and gives a brilliant light. It has always puzzled me why the general public has not taken more universal advantage of this invention. Considering the great increase of light, it is not expensive; for one Albo-carbon light has about the same illuminating power as three ordinary gas-jets.

The gas-consumer is usually supposed to be a member of the great army of grumblers, and not a common grumbler, but one who really has a grievance. He is always charged for more than he burns. By some occult magical device those rascally gas companies make his meter show more gas burned than ever could be consumed in his house. "Why, bless you! one summer he didn't burn gas at all, and his gas bill was just the same at the end of the quarter; they are a set of thieves, of course they are." In very great measure the cause of all his troubles lies at his own door. He burns gas in the most wasteful way imaginable. He may be using one burner or twenty, but his pressure at the meter is the same in both cases. When the gas is done with for the night he never thinks of turning it off. The grumbling gas-consumer should have what is called a governor attached to his meter; by means of this instrument the pressure of gas is automatically adjusted to suit the consumption. There are many such instruments in the market, but, as the Irishman said, "they are one as good as another, and a good deal better." Any form (but especially the "Stott"), if used according to the direction of the maker, will answer its purpose. If such a piece of apparatus is not used, a considerable amount of gas must escape through the flame unburnt, constituting a source of waste of gas and of pollution of the air at the same time.

No gas tap is absolutely perfect, and if the gas is turned on at the meter whilst the burners are not in use, a small but constant escape is taking place. The remedy for this is obvious. There are several popular errors connected with gas matters which I must, to make this paper have at least a semblance of completeness, explain away. In the first place, the air in the pipes; which air is usually supposed to be sent direct from the gas-works, and charged to the consumer as gas—another of the wicked doings of those dreadful gas companies. Well, it would be a very risky thing, not to say expensive, for a gas company to supply air along with gas to its consumers, and the air which appears in a pipe which has not been in use for some time simply proves one fact mentioned above, viz., that gas taps are not above suspicion.

The late Professor Graham, of the Mint, discovered that if the different gases were contained in vessels separated by a porous medium, an interchange took place, and that ultimately the gases would become so intermingled that the composition would be the same in both vessels. To this phenomena he gave the name of *diffusion*. Now it is due to diffusion that air finds its way into gas-pipes. On one side of a badly-fitting tap there is coal-gas, on the other atmospheric air; intermingling or diffusion takes place, the light coal-gas finding its way out, and air finding its way in. Of course, if the gas is not turned off at the meter, the pressure forces the mixture out, and keeps the pipe filled with gas; but if the gas is turned off at the meter, there is no force to drive out the mixture, and the diffusive action goes on until air at length takes the place of the gas.

The second fallacy is that a gas-holder is as dangerous an article as a well-filled powder-magazine, for that if a light were dropped into a gas-holder a most violent explosion would follow. In actual fact the light would go out, and the gas would simply burn at the opening. I am afraid that very few of my readers would put such faith in science as to sit calmly on the top of a gas-holder and drop lighted matches into a hole in the top; yet I can assure them that nothing disastrous would follow. Coal-gas, in chemical language, is not a supporter of combustion, and therefore ordinary combustibles will not burn in it. It will not burn itself, unless air is present. If, however, gas is mixed with air, then we have an explosive mixture; but so long as it is simply gas it is harmless as an explosive agent. When the papers speak of an explosion of gas they really mean an explosion of air and gas.

We hear a good deal of the baneful effects of the products of combustion of coal-gas. What do the products consist of? If the gas is pure, carbonic acid gas and water are the chief products, and the only harm that a gas jet can do under these circumstances is to use up the oxygen of the air—a substance which is of vital importance—and increase the amount of carbonic acid gas, which exerts a depressing influence on the system, rendering persons breathing such an atmosphere prone to catch cold, and other like evils. It is found that one cubic foot of gas destroys the oxygen of eight cubic feet of air. Now a common gas-burner consumes about three cubic feet of gas per hour, so that every jet burning in a room removes the oxygen of twenty-four cubic feet of air per hour. The only means of overcoming this difficulty is to have some method of removing these deleterious compounds, and to ensure a sufficient supply of fresh air to take the place of that used up.

A sick person requires more air than a healthy individual, therefore the use of gas in a sick-room is prohibited, unless some special contrivance is used for ventilating purposes; but as gas is usually supplied to us, and as we usually burn it, a number of other products are produced, in smaller quantities, perhaps, than those already mentioned, but much more deleterious. The gas is never free from sulphur compounds, and these pass off in the form of sulphurous acid, becoming ultimately converted into sulphuric acid, and destroying our books, pictures, and furniture. Carbonic oxide and ammonia are also amongst the products, the former being a very poisonous gas, and the active poisoning matter of the charcoal-fire method of suicide, which finds favour with *les misérables* of *La Belle France*.

From all these facts we can readily understand the feeling of depression and lassitude that follows confinement for some hours in a room lighted with a large number of gas jets. The use of gas as an illuminating agent has many advantages, but it means increased ventilation, unless we are willing to suffer for the effects, which are bound to make themselves felt sooner or later.

In a workshop in Paris there were four hundred men, and the room was lighted with four hundred gas-burners; the ventilation was indifferent, and the men suffered in health considerably; the appetites of the men were also bad. General Morin introduced a more efficient system of ventilation, and at once the health and appetites of the men improved, the cases of illness decreasing by a third.

To what extent lamps and candles affect air we will determine in a future article.

JONATHAN HUTCHINSON says he has never failed to relieve nose-bleeding by immersing the feet to the knees in water as hot as it can be borne.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

THE THROAT AND LUNGS.

Now is the time for diseases of the throat and lungs, when thousands are laying the seeds of consumption. Coughs and colds contracted now may a little later run into a chronic trouble which will carry the life away. Preventive and curative measures are therefore desirable for all to know.

First as to the throat. For a dry, acutely inflamed throat, painful and irritable, steam is the thing, as it is in a similar condition of the bronchial tubes. But steam alone will not suffice. It should be charged with some substance like Hazeline, a little of which may be poured into a basin of boiling water, and the steam inhaled, the face and basin being surrounded by a towel. In quinsy, pharyngitis, and acute laryngitis, this treatment cannot be bettered, except that in the intervals of treatment a Tabloid of Chlorate of Potash may be advantageously sucked upon the tongue. The latter drug is very useful in chronic throat troubles, and is a favourite *vade mecum* with clergy, and other public speakers, and with public singers and actors. One laryngologist asserts that it has been the means of saving many a life. Where a tenacious mucus accumulates in the throat, borax is the best of remedies. By its alkaline action it melts the mucus away, not irritating at the same time, as some drugs are wont to do, but soothing and greatly toning the parts. Borax is procurable in the form of Tabloids alone; but the best way to use it is with chlorate of potash. It is hardly too much to say that every one should ever have at hand some Potash and Borax Tabloids.

For relaxed, weakened, and sore throats there is a powder which a most successful physician once told the writer almost made a reputation for him. It is not very pleasant to the taste, and is somewhat inconvenient to use. The formula is as follows:—Pulv. cubebæ (recent), Pulv. guaici res., Pulv. potass. chlorat., Pulv. sacch. alb., each half an ounce. Mix.

DIRECTIONS.—As much as will lie on a sixpenny piece to be dissolved slowly upon the tongue every hour or two, increasing the interval of using according to progress.

In conditions of the throat where pain is the prominent symptom, the Voice Tabloids are just the thing. They are of service also in weakness of the throat and voice, accompanied by hacking.

One of the best of all remedies in bronchial and some other lung troubles is Eucalyptia. The antiseptic healing balsamic properties of the *Eucalyptus globulus*, from which this is prepared, are not a new or unknown quantity. Where the eucalyptus grows consumption wanes. In fetid or purulent expectoration, Eucalyptia will prove wonderfully corrective. An admirable way to employ it is in the Vereker's Ammonium Chloride Inhaler. Used in this way neutral fumes are taken into the lungs charged with the Eucalyptia.

Often have we referred to Pure Terebene (Burroughs), for winter cough. When other agents prove useless, this does not fail. And no other drug can compare with it for general curative power in chronic bronchitis and winter cough. From five to twenty drops of it may be taken on a lump of sugar or in mucilage. It may also be used in the Inhaler after the manner above recommended for Eucalyptia.

THE PROPER NUMBER OF VACCINATION MARKS.

THE *British Medical Journal* directs attention to a matter of high public importance in the following article:—

A public vaccinator has made to us a complaint as to the practice of a private practitioner in his neighbourhood vaccinating children in a smaller number of places than the Local Government Board requires from every vaccinator under contract; the practitioner publicly notifies that he will vaccinate infants in one place only, and by this means he draws to himself cases which otherwise would be taken to the public station.

A letter addressed to the Home Secretary has, we are informed, led to the expression of the opinion that there is no legal means by which this procedure can be checked; but the subject is of so much importance in relation to the protection of the public against small-pox, that it may be well to state the grounds upon which the demand is made for the production of a larger number of vesicles than the private practitioner holds to be necessary.

It is now many years since Marson showed that the number of vesicles produced in infancy was in inverse proportion to the mortality from small-pox, if these individuals subsequently came to suffer from this disease. His well-known figures deserve to be given here.

Cases of Small-Pox classified according to Vaccination Marks.	Mortality per cent. in each Class.
Unvaccinated	35½
1. Stated to have been vaccinated, but having no cicatrix	21¾
2. Having one cicatrix	7½
3. ,, two cicatrices	4½
4. ,, three cicatrices	1¾
5. ,, four or more cicatrices	¾

This conclusion was arrived at as the result of his experience at the London Small-Pox Hospital at Highgate, and has since been amply confirmed by the statistics of every small-pox hospital where the question has been studied. Dr. Gayton's statistics, dealing with

BRAND & CO.'S
INVALID
SOUPS,
Potted Meats,
PRESERVED
PROVISIONS, ETC.

BRAND & Co.'s
PRESERVED PROVISIONS SOUPS & SPECIALTIES & INVALIDS
ESSENCES of BEEF, MUTTON, VEAL & CHICKEN, BEEF TEA, TURTLE SOUP & JELLY, MEAT LOZENGES &c.
SOLE ADDRESS No. 11, LITTLE STANHOPE ST. MAYFAIR, W.

BRAND & Co.'s
A1 SAUCE.
A fine Tonic and Digestive.
An excellent Relish for
"Fish, Flesh, or Fowl."

Under the direct Patronage of the British, United States, Canadian, and other Governments.

some 10,000 cases, teach exactly the same lesson, and are as follows:—

Having good vaccine cicatrices.....	3	per cent. mortality.
,, imperfect vaccine cicatrices	9	,, ,,
Stated to have been vaccinated, but having no vaccine cicatrices	27	,, ,,
Unvaccinated	43	,, ,,

When the subject of the severity of attack by small-pox comes to be considered, hospital statistics point to the same conclusion. The advantage to the public through the procedure of the public vaccinator may be well instanced by Dr. Stevens's inquiries in regard to the children under ten years of age who died from small-pox in 1881; the total number of children who died in that year from this disease was 125, a number which has to be reduced to 117 by deduction of those who were discovered, on his personal inquiry, not to have been vaccinated at all, or to have been unsuccessfully vaccinated.

This number, 117, may be divided, Dr. Buchanan states, into 82 vaccinated by private practitioners, and 35 vaccinated by public vaccinators. He further states that the number of vaccinated children under ten years of age in London is made up in almost equal numbers of those vaccinated by private practitioners and of those vaccinated at the public stations. Dr. Buchanan's comments on these figures deserve to be stated, as they bear directly upon the point we are discussing. He says:—

"From these figures we may deduce the fact, creditable to public vaccination in London, that it protects against small-pox much more than private vaccination. The difference between the two, however, deserves a little more consideration. Children privately vaccinated comprise most of the children of the upper classes, who certainly run less risk of small-pox infection than the poor. The comparatively large mortality among those privately vaccinated, therefore, becomes more striking. Some of such children are, doubtless, vaccinated efficiently enough, and are protected from small-pox as completely as any of those vaccinated at public stations; but we who have much to do with the total vaccination of London know of a particular source of inefficiency in private vaccination, of a sort to be responsible for a relatively high mortality from small-pox. It consists in a form of private vaccination that offers itself in competition with public vaccination, and which parades its inefficiency as a reason for its acceptance by ignorant people. Its professors say to young mothers: 'Do you come to me, and I won't hurt your baby; I'll make only one place on its arm,—not four, like those public vaccinators do.' And, undoubtedly, there are medical men to be found who, having formed some opinion of their own about the sufficiency of one vesicle, cannot be induced to set aside that opinion in deference to the indisputable evidence to the contrary that every small-pox hospital holds up to them."

In conclusion, we have no hesitation in expressing the opinion that every practitioner, public or private, who vaccinates in fewer places than is required by the public vaccinator, is wanting in his duty to his patient. We may sympathize with the public vaccinator for the loss of fees, but the injury inflicted upon the public is much greater. We hope, however, that the practice to which our correspondent directs our attention will be diminished as a better knowledge, both on the part of the public and the profession prevails. The teaching of vaccination in England is still lamentably deficient, and until it is placed upon a better footing we fear we shall still hear of sham vaccination.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

THE PECULIARITIES OF CHILDHOOD IN DISEASE.

Dr. Dickinson, in the course of a recent lecture on the above subject, spoke as follows:—

I propose to take as the chief subject of my discourse to-day the differences between children and adults in regard to morbid action and the effects of treatment. Children die in greater proportion than adults, though all due allowance may have been made for the fact that there are more of them. The less the age, as a rule, the greater the number. The trap-doors and pit-falls which beset the bridge of life are more thickly placed at its entrance than later on, and though they become more numerous again towards its end, there are fewer travellers left to encounter the dangers. One-third of those who are born die before the completion of their fifth year.

It is often said in a case of illness, and sometimes with truth, "The youth of the patient is in his favour;" but it may sometimes be said with equal truth, "It is to the advantage of this patient that he is not young." We may be old, battered, gouty, and atheromatous, every part about us blasted with antiquity; our arteries are apt to break, and that suddenly; but we get slow, and some of our disorders partake of our disposition. Youth is the period of active nutrition, while degeneration is the slow accompaniment of age. The active nutrition of youth is by no means an unmixed advantage, for it imparts its character to all diseases which depend on production and growth. Besides this, the activity of nutrition calls for a proportionate supply, and entails liabilities when that supply is insufficient or unsuited which keep pace with the demand made by the tissues.

"Old persons," says Hippocrates, "endure fasting most easily; next adults; young persons not nearly so well; and most especially infants, and of them such as are of a particularly lively spirit." Chossat found by experiment that young animals bore fasting worse than older ones. At the siege of Paris we are told that those who suffered most from want of food were the very young, nursing mothers, the sick, and the wounded, among all which classes the mortality from this cause was great. And it needs no multiplication of testimony to prove what is almost self-evident,—that as infants require food more often than older children, and children more often than adults, so the effects of its absence or insufficiency must present themselves in some similar ratio.

The quick exhaustion of childhood might be exemplified in other ways. The apparently disproportionate effects of loss of blood are well known to surgeons; let us hope that they are chiefly made known to physicians by the writings of a bygone age, in which we may without difficulty find cases which would seem likely to have ended otherwise than they did had leeching or some other mode of depletion been less liberally employed. I may add a word in the same direction about diarrhœa. This is very common among infants; I cannot here discuss its causes or management. Our out-patient physicians treat cases by scores, and mostly with success.

But one of the medical experiences which one is least desirous of repeating is the rapid and unexpected sinking

How Pills are Made.

THE custom of taking medicine in the form of pills dates far back in history. The object is to enable us to swallow easily in a condensed form disagreeable and nauseous, but very useful drugs. To what vast dimensions pill-taking has grown may be imagined when we say that in England alone about 2,000,000,000 (two thousand million) pills are consumed every year. In early days pills were made slowly by hand, as the demand was comparatively small. To-day they are produced with infinitely greater rapidity by machines especially contrived for the purpose, and with greater accuracy, too, in the proportions of the various ingredients employed.

No form of medication can be better than a pill, provided only it is intelligently prepared. But right here occurs the difficulty. Easy as it may seem to make a pill, or a million of them, there are really very few pills that can be honestly commended for popular use. Most of them either undershoot or overshoot the mark. As everybody takes pills of some kind, it may be well to mention what a good, safe, and reliable pill should be. Now, when one feels dull and sleepy, and has more or less pain in the head, sides, or back, he may be sure his bowels are constipated and his liver sluggish. To remedy this unhappy state of things there is nothing like a good cathartic pill. It will act like a charm by stimulating the liver into doing its duty, and ridding the digestive organs of the accumulated poisonous matter.

But the good pill does not gripe and pain us, neither does it make us sick and miserable for a few hours or a whole day. It acts on the entire glandular system at the same time, else the after-effects of the pill will be worse than the disease itself. The griping caused by most pills is the result of irritating drugs which they contain. Such pills are harmful, and should never be used. They sometimes even produce hæmorrhoids. Without having any particular desire to praise one pill above another, we may, nevertheless, name Mother Seigel's Pills, manufactured by the well-known house of A. J. White, Limited, 35, Farringdon-road, London, and now sold by all chemists and medicine vendors at 1s. 1½d. per box, as the only one we know of that actually possesses every desirable quality. They remove the pressure upon the brain, correct the liver, and cause the bowels to act with ease and regularity. They never gripe or produce the slightest sickness of the stomach, or any other unpleasant feeling or symptom. Neither do they induce further constipation, as nearly all other pills do. As a further and crowning merit, Mother Seigel's Pills are covered with a tasteless and harmless coating, which causes them to resemble pearls, thus rendering them as pleasant to the palate as they are effective in curing disease. If you have a severe cold, and are threatened with a fever, with pains in the head, back, and limbs, one or two doses will break up the cold and prevent the fever. A coated tongue, with a brackish taste in the mouth, is caused by foul matter in the stomach. A dose of Seigel's Pills will effect a speedy cure. Oftentimes partially decayed food in the stomach and bowels produces sickness, nausea, &c. Cleanse the bowels with a dose of these pills, and good health will follow.

Unlike many kinds of pills, they do not make you feel worse before you are better. They are, without doubt, the best family physic ever discovered. They remove all obstructions to the natural functions in either sex without any unpleasant effects.

DELIGHTFULLY PERFUMED BATHS.
USE
ORIENTAL AROMATIC SALTS.

FOR
BATH
AND
ALL TOILET
PURPOSES.

These Salts, possessing great hygienic properties, render the water very soft, and impart a most refreshing perfume.

The ORIENTAL AROMATIC SALTS are unrivalled for beautifying and preserving the skin, rendering it soft and velvet-like, and for keeping the complexion bright and clear.

To be had of all Chemists, Perfumers, and Stores.

Sole Patentees: S. TRAVADO & CO., London.
To be had also of Messrs. BREIDENBACH & CO., Perfumers to the Queen, 157b, NEW BOND-STREET, W.

TEETH.
A COMPLETE SET, ONE GUINEA.
Single Tooth, 2s. 6d.
FIVE YEARS' WARRANTY.

Dr. ANDREW WILSON, late R.N., says:—"I can recommend Mr. Goodman as a very skilful and humane dentist. His reasonable charges should attract to him all classes."

MR. GOODMAN, *Surgeon Dentist,*
(Late Manager for Messrs. Eskell,)
41, LUDGATE HILL (Opposite Old Bailey).
Hours 10 to 8.

Also at 68a, Market-street, Manchester; 30a, Bold-street, Liverpool; 57a, Boar-lane, Leeds; 2, Piccadilly, Bradford; 2, Bank-street, Sheffield; 36, Gallowtree-gate, Leicester; 8, Pavilion Buildings, Brighton; 251, Sauchiehall-street, Glasgow; 29, Hanover-street, Edinburgh; 156, Union-street, Aberdeen, &c., &c.

LUNG SAVE YOUR LIVES BY TAKING TONIC
LUNG **OWBRIDGE'S LUNG TONIC** TONIC
LUNG **THE MIGHTY HEALER.** TONIC
LUNG *It has a power over disease hitherto unknown in Medicine.* TONIC
LUNG *Are you at all Weak-chested, or inclined to be Consumptive, with just a touch of Cough now and then?* TONIC
LUNG *"Try this Wonderful Medicine." The Cough and Weakness will disappear as if by magic, and you will feel a strength and power you never had before.* TONIC
LUNG Have You a Cough?—A Dose Will Relieve It. TONIC
LUNG Have You a Cold?—A Dose at Bedtime Will Remove It. TONIC
LUNG *Bronchitis and Asthma it relieves instantly.* TONIC
LUNG *The Spasms of Coughing so dreadful in Whooping Cough become less with each dose of the medicine.* TONIC
LUNG TONIC
LUNG "I always had some prejudice against using patent medi- TONIC
LUNG cines, but your Lung Tonic has removed this misgiving. TONIC
LUNG Suffering from a severe cold, and on the eve of a public TONIC
LUNG engagement, being in a dilemma by fearing the loss of my TONIC
LUNG voice, I was strongly advised by a friend to try your Lung TONIC
LUNG Tonic. I did so, and to my most agreeable surprise, after TONIC
LUNG the third dose I was able to officiate with perfect ease. I TONIC
LUNG resolved henceforth to add your valuable medicine to my TONIC
LUNG household remedies, and certainly shall never be without it. TONIC
LUNG (Rev.) F. C. S. KRŒNIG, *Vicar of St. Barnabas, Hull.*" TONIC
LUNG *Prepared by* W. T. OWBRIDGE, *Chemist, Hull.* TONIC
LUNG *Sold in Bottles, 1s. 1½d., 2s. 9d., 4s. 6d., and 11s., by all Chemists and Patent Medicine Vendors. Wholesale, all London and Provincial Houses.* TONIC

MEDAL OF THE SANITARY INSTITUTE, 1888.
CELLULAR.
Refreshing Sleep secured by using CELLULAR SHEETS AND COUNTERPANES.
THE WARMEST AND MOST HEALTHY.

Cellular Underclothing and Night Garments the healthiest for all climates, easily washed, unshrinkable, and exceedingly durable. The principles recognized are the non-conducting power of air, and the free breathing of the skin. Write for complete List of Town and Country Agents.

Wholesale Only—THE CELLULAR CLOTHING COMPANY (LIMITED), 75, Aldermanbury, London, E.C.

Read "THE THEORY AND PRACTICE OF CELLULAR CLOTHING," post free, three stamps.

WOOLDRIDGE'S TINCTURE
FOR
GOUT, RHEUMATISM AND NEURALGIA.
OF ALL CHEMISTS.

SEVENTEEN GOLD, SILVER, & BRONZE MEDALS.
WM. WOOLLAMS & CO.,
ORIGINAL MAKERS OF GUARANTEED
NON-ARSENICAL
WALL PAPERS.
TO BE OBTAINED OF ALL DECORATORS.

Manufactory and Sole Address:
110, HIGH STREET
(Near Manchester-square),
LONDON, W.

NOTE TRADE MARK.

TOWLE'S
Pennyroyal & Steel Pills
FOR FEMALES

Quickly correct all irregularities and relieve the distressing symptoms so prevalent with the sex. Boxes, 1s. 1½d. and 2s. 9d., of all Chemists. Sent anywhere for 15 or 34 stamps, by

THE LINCOLN AND MIDLAND COUNTIES DRUG COMPANY, LINCOLN.

BEWARE OF IMITATIONS.

New Book by Dr. Andrew Wilson.

STUDIES IN LIFE AND SENSE.

BY

DR. ANDREW WILSON.

With numerous Illustrations.

LONDON
CHATTO & WINDUS,
214, PICCADILLY, W.

which sometimes occurs in this disease and time of life. This may take place with a rapidity and absence of warning which has no parallel among older persons, at least in this country. No disorder so lightly looked upon calls for more watchful care. When death occurs, it is with every organ ostensibly sound; death has been caused by the drain of fluids, and that long before any such result would have occurred at a greater age. I need not point to rickets as a disease almost peculiar to early childhood, and which is continually due to defects in quantity or quality of the milk provided as food.

It is not, perhaps, so generally known that a similar deficiency is apt to make infants scorbutic. There is land scurvy as well as sea scurvy, and from this young children suffer far more often than grown people. Sore gums, purpura, and hæmorrhages, especially by way of the kidneys, are often met with in infants, and always, so far as I have seen, from one of two causes,—the absence of fresh milk, or the use of fresh milk of an inferior quality. Fresh milk, if good, whether from the woman or the cow, is antiscorbutic; but, curiously enough, that property is not possessed, or not to the same extent, by condensed milk. I do not profess to explain this, but have seen many proofs of it in the appearance of scurvy under some artificial preparation of milk, and its disappearance under milk fresh from the cow. Perhaps if we could fully explain this, it might teach us something about scurvy.

"No, Bella," said Miss Afterthought's male parent, with a decisive bang of the piano lid, "you shall not sing the 'Lullaby' or any other song from *Erminie* this evening." "Oh, do let her?" pleaded Mrs. Afterthought, "I do so love a popular malady."

Lectures on Sanitation, Parke's Museum.—The following lectures, Session 1888-89, will be given at the Sanitary Institute, Parkes Museum, 74A, Margaret Street, W., on Thursdays, at 5 p.m.:—1888, Dec. 6th, Sir Douglas Galton, K.C.B., D.C.L., LL.D., F.R.S., on "The Future of the Amalgamated Societies, the Parkes Museum and Sanitary Institute of Great Britain."—Dec. 20th, Mr. Ernest Hart, on "The new Local Government Bill and the County Councils, especially in relation to Sanitary Administration."—1889, Jan. 24th, Dr. G. V. Poore, on "London, Ancient and Modern, from a Sanitary point of view."—Jan. 31st, Professor F. Jeffery Bell, on "The Worm Parasites of Human Food."—Feb. 14th, Dr. B. A. Whitelegge, on "Notification of Infectious Diseases."—Feb. 28th, Col. W. Hope, on "The Metropolitan Sewage Question."—March 14th, Professor George R. Milne Murray, on "Fungi in their relation to Putrefaction and Sanitation."—March 28th, Professor W. H. Corfield, M.A., M.D., on "House Sanitation from a Householder's point of view."—April 11th, Alfred Haviland, M.R.C.S.E., Late Lecturer at St. Thomas's Hospital, on "The Geographical Distribution of Disease," &c., &c., on "The Bagshot Sands in relation to Health."—May 2nd, Dr. Bushell Anningson, on "Rural Epidemics."—May 16th, Mr. H. E. Davis, late Chief Officer of Margate, Westgate, Broadstairs, and St. Peter's Fire Brigades, on "Fires and Fire-Escapes, and the Prevention and Arrest of Fires." Non-members:—admission to each lecture, 6d.; ticket for the whole course, 5s.

Diseases of the Nose, with Chapters on Ozœna, Impure Breath, Polypus, and Malformation of the Nose, and Analysis of Cases treated by a new method. By Litton Forbes, M.D., Senior Surgeon to the Eye and Ear Hospital, 67, Wells-street, London, W.—Henry Renshaw, 356, Strand, W. Price 13d. —[Advt.]

Public Health

"Health is the first Wealth."—*Emerson.*

POPULAR ERRORS ABOUT CONTAGIOUS DISEASES.

There is nothing of vital importance to the general welfare which is so little understood as the subject of contagion in its relation to epidemics. There are contagious diseases easily propagated by contact with persons affected by them, if this occurs at the critical stage of the attack. The most common of these are small-pox, measles, whooping-cough, and mumps. The medical fraternity generally include scarlet fever and diphtheria, but the fact in regard to these is not so well established. Both of the latter will run through a family where all are subject to the same conditions, but it is not certain that a person afflicted with either, if transported to a totally different atmosphere, will communicate any infection to a visitor in good health.

In regard to diseases that are positively contagious, there is a widespread notion that is wholly erroneous. We know many cases of small-pox that are attributed to causes wholly insufficient, in our judgment, to produce them. A physician of our acquaintance stoutly insists that his mother caught the small-pox in passing a house within which, at some distance from the street, lay a person suffering from that disease. And another gentleman whom we know asserts that he took the measles simply by driving through a thoroughfare in which lived a family with several children who were just taken with that malady. Of course, it is just possible that a strong wind might bring the atmosphere charged with strong contagion from a dwelling to the street, so as to infect one who was passing; but it is far more likely that it was communicated in these, and many similar cases, by some means far less remote.

We know a case where the victim insisted that he must have caught the small-pox in crossing a ferry, within 300 feet of which a ship was moored that had brought home two of the crew sick with it on her last voyage. It turned out afterward that a man just taken with the disease had gone home in a crowded street-car, not knowing what was the matter with him, and that five persons (three children and two adults, including the gentleman in question) had caught the complaint from him. The infection will remain for some time in a woollen garment; and, while the wearer may be protected by inoculation or vaccination, or a previous attack of the disease, a stranger may catch it from this tainted fabric. But, however the infection may be communicated, the fact that these diseases are propagated by contact is well established.

But certain other diseases, frequently prevalent as epidemics, are not thus contagious in any sense. Yellow fever is one of these, and it was never communicated in a healthy atmosphere by one who was suffering from it. If all of the Jacksonville fever-stricken patients without injury to themselves could be removed and distributed in healthy northern homes, there would be no more danger to persons coming in contact with them, either as nurses or visitors, than there would be of catching a broken leg from one thus impaired. It is absolutely non-contagious in an atmosphere not charged with the producing causes of the malady. It may be asked, Why not, then, remove those who are afflicted? The answer is that any change in the atmosphere after a patient is taken down

with yellow fever is as fatal as a bullet through the brain.

Even a slight change in the outside air of the same place, caused by a cool wave, will frequently end the lives of a large number who might otherwise have become convalescent. But the well persons who are not needed ought to be sent away; and though some of them may have the fever after they reach the north, not one of them will carry any "seeds of the disease" to the residents of healthy localities. It is precisely so with cholera and dysentery, two diseases very apt to become epidemic from local causes. There is this difference, that these sufferers may, and often have been carefully removed after they were attacked without injury to themselves, and certainly without injury to anyone else.

No one need be scared, therefore, at a personal contact with any of the people of Jacksonville, who are fleeing from that fever-stricken place. If they bring the fever in their blood, and suffer from it after they arrive, they may be nursed in our hospitals, or even in our dwellings, with no personal dread of any dire result. Yellow fever is produced in new cases by that which caused the disease in others; but it is no more contagious than baldness, or the ossification of an artery. There is something more in the right understanding of this than the mere acceptance of a true theory for the benefit of the intellect. It is a practical question, and gives us assurance that we may deal kindly with those who flee to us for refuge, without incurring any danger through such instrumentality to ourselves or to those dearest to us in our homes.

CALCUTTA AND CHOLERA.

THE annual death-rate of India is about double that of England, except in a few limited localities inhabited mainly by European residents where modern ideas of sanitation are carried out. This means that in that country there are over two millions of deaths and fifty millions of cases of sickness every year which are preventible, implying enormous suffering and diminution of productive force. For the continuance of this state of things the Government of India must be held responsible, the more so since it has thus far done little towards scientific investigation of the causes of this great loss of life and wealth, has provided no effective machinery for the supervision of the sanitary interests of the people, and has not exercised the powers which it possesses to compel proper municipal sanitation.

The evil results of this negligence are not confined to India. The connection of that country with Europe and with this country through the ties of commerce are such that many other nations are injuriously affected, and on account of the cholera certain portions and ports of India are a constant menace to the health and prosperity of a large part of the civilized world. Take, for example, Calcutta, which has a town-population of over 430,000 and a suburban population of about 250,000 more. The annual death-rate in the town is about 29, and that of the suburbs about 50 per 1,000 of population, as reported, but the returns are imperfect, and the actual mortality is considerably greater. The average annual number of deaths from cholera exceeds 1,600. The town has a general water-supply, and a system of sewers; but the water-supply is quite insufficient, and is not half enough to keep the sewers properly cleansed. The drainage works have never been completed, the provisions which the plans contained for keeping the sewers clear of deposits have not been carried out, and no adequate supervision of house-drains and their connections has been provided. In the suburbs there is neither general water-supply nor sewerage, and the foul pools and tanks are no doubt responsible for a large part of the excessive mortality. Cholera occurs chiefly around the tanks, and in those parts of the town where there is great scarcity of water.

Even in those portions of the town where there is a general water-supply, it is hardly equal to two gallons per head per day.

In short, the causes of the great mortality and of the continued prevalence of cholera in certain localities of Calcutta are quite well known, and the means of removing these causes are also known. They have been set forth in the report of a Government Commission, by Indian engineers, in the reports of the Health Officer of the city, and in the publications of the Calcutta Public Health Society. The improvements require money, and it is the business of the Government to compel the provision of this money. Indian officials seem, as a rule, to think that it is useless to take trouble about this matter, and look coldly, if not with actual displeasure, upon those who persist in warning them of the danger. This was the tone of the discussion upon an able paper on the public health of India, read before the Society of Arts by Mr. Justice Cunningham, in January last. One official, Sir George Campbell, thought that everything possible had been done; that cholera is not a preventible disease, and objected to subjecting the country to sanitary despotism. A surgeon-major, who had been a member of the Sanitary Department in India, said that "you could not prevent cholera from occurring where it was endemic." Probably, sanitary officials who take this view will not prevent it.

The remarks of Dr. George Buchanan, the medical officer of the Local Government Board, show that he not only agrees with modern scientific observers that cholera is preventible, but that he appreciates the responsibility which England incurs in failing to apply the well-known means for such prevention. He said, "The peoples of Europe will not be content with England's complacently saying that she, knowing the value of sanitation, could keep the cholera out of England and did not want a quarantine; they would want to know why she should keep cholera up in India."

He might have added that the United States will have something to say about this in the near future, and the time is not far off when public opinion in all civilized countries will unite in condemning the ignorance and indolence of those officials who try to excuse their inefficiency by claiming that cholera is a disease of winds and weather over which they have no control.

We have before us the report of Dr. W. J. Simpson, the Health Officer of Calcutta, for the year 1887. It is a folio volume of about 150 pages, with maps and illustrations, among which are some striking back-yard views of privies, &c., taken from photographs. It will probably not increase Dr. Simpson's popularity with the Government officials who are responsible for the continuance of the foul and dangerous conditions described; but it is good and necessary work, and he should have the support of all intelligent men, not only in India and in England, but in all parts of Europe and of this country, for the work which he shows should be done in Calcutta is necessary for our own protection against future epidemics of cholera.—*Sanitary Engineer.*

THE latest antiseptic is sodium fluosilicate. It is not poisonous and has no smell; it is sparingly soluble in water, and has only a very slightly saline taste.

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

THE "MAN-TRUNK."

It is told of two cripples, chatting together, that the one said to the other, "You have more chance; you are more deformed than I am, and people give you more." It is unfortunately true that poor creatures who want one or more of their members, and who have not any other resource but mendicity, those who are the most impotent, the most startling, are the ones who excite most pity and public charity. They are in the eyes of their *confrères* those who have the most "chance" or "good luck."

Fig. 1.—The "Artist-Trunk," or "Man Without Arms and Legs."
(*Drawn from Nature, at Paris, at the Boulevard St. Martin.*)

An individual who exhibited himself at Paris in 1886, under the name of the "artist-trunk," and who had neither legs nor arms, makes the most of his infirmity in a fashion quite different from begging. This individual executes in public a series of skilful acts, and even gymnastics, which for their repetition by ordinary persons would require the use of both hands or their two legs. We shall describe these acts later on in detail. The "man-trunk" has a large and very muscular body; his neck is very short, and he appears strong and robust. In the little speech which he makes to the public he says that he is thirty-four years of age, was born in Siberia, at Troizk, Government of Orenbourg. His mother had thirteen children before him, all constituted in a normal fashion. His health is excellent, and he has never been ill; he has travelled all over Russia, Sweden, Norway, Germany, Austria, and Italy, showing himself as a curiosity since 1870. He was married in Austria in 1876, and has actually five children, all boys, and perfectly formed.

His name is Nicolaï Wassiliewitsch Kobelkoff. He calls himself the "artist-trunk"; his placards bear that he is "The marvellous phenomenon, the greatest curiosity of the age." Let us add that the artist-trunk has the appearance of being very content with his lot. In his *séances*, while waiting for the audience to be as numerous as possible, he talks and laughs with his children, pretty little blondes (one of them is represented in Fig. 1) or says some amiable words to the persons who enter. His face beams with openness and good-nature (Fig. 2).

From an anatomical point of view, the artist-trunk has been examined many times by medical commissions, particularly at Lyons, where he stayed for some time. He has two rudimentary thighs—the right one has the femur (or thigh-bone) about fifteen centimètres long, the other is a little longer, from twenty to twenty-two centimètres. (A centimètre is rather less than half an inch.) The left arm is entirely wanting; a rounded bone representing the head of the humerus (or upper arm bone) alone occupies the joint of the shoulder. The right arm is represented by a sort of conical stump about twenty centimètres long, composed of a part of the humerus, covered with well-developed muscles. One may distinguish clearly the deltoid, the large muscle of the shoulder, and of the top of the arm. All the muscles which insert themselves in one part on the walls of the chest or on the shoulder-blade act on the head of the humerus and on the first portion of it; but the muscles which every well-constituted man possesses, starting from this last region, and acting on the hand or fore-arm (such as the biceps, the brachialis and the triceps) are atrophied and run together at their ex-

tremities. They form the summit of the conical stump, and seem to have an influence on its mobility.

It is this rudiment of an arm that the artist-trunk utilizes in a fashion the most ingenious by opposing it to his cheek, chin, and body. He executes a series of curious feats which astonish the spectators. The following is a description of these feats:—The artist-trunk being placed on a chair near a table on which are different objects, takes a pen, fixes it between his arm and cheek, dips the pen in an ink-bottle, then, on squares of paper, writes the name of each one of the spectators, and offers it to them as a souvenir.

The artist-trunk, at our request, has written the lines depicted in Fig. 3. His writing, as one can see, is very regular, with beautiful scrolls to the capital letters, and a style worthy of a writing master. He cuts paper with scissors. He takes a *carafe*, uncorks it, pours the liquor in a glass, places this on his arm, and approaches it with his lips. He takes a fork, pierces pieces of bread placed on a dish, and carries them to his mouth. He sups with a spoon, draws his watch from a side-pocket, opens the case by pressing the button, looks at the time, and replaces the watch in his pocket. He threads a needle. To do this, he takes the needle in his mouth, puts it in a pin-cushion, seizes the thread between his lips, passes it through the eye of the needle. Holding with his arm the extremity of the thread thus passed through, he turns round the pin-cushion, again seizes the thread with his lips, and completes the operation. He does a simple calculation on a blackboard, draws a design on paper with pencil or chalk; takes a pistol, aims at a lighted candle, fires, and extinguishes the flame.

Fig. 2.—Nicolaï Wassiliewitsch Kobelkoff, the "Man-Trunk."
(*From a Photograph.*)

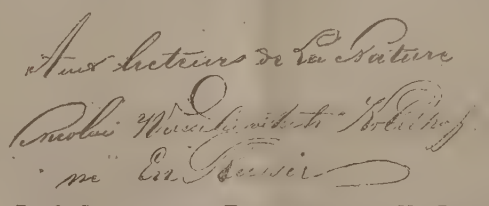


Fig. 3.—Specimen of the Handwriting of the Man-Trunk ("To the readers of *La Nature*, Nicolaï Wassiliewitsch Kobelkoff, born in Russia.")

From an acrobatic point of view, the artist-trunk leaps from his chair to the ground, then he executes a series of bounds by bending and unbending his spine, resembling a little the efforts of an individual doing a sack-race. He makes also a kind of somersault by bending backwards until his shoulders touch the ground, rights himself, and comes to his normal position. Finally, as a trial of strength, he carries a man of medium weight placed upright on his rudiment of an arm. Such are the exercises of the artist-trunk.

The history of human monstrosities already contains in its register a certain number of examples of children born without limbs. Scientists place them in the class of monsters by default, and in the category of *ectroméliens*—that is to say, individuals with abortive members. Isid. Geoffrey Saint-Hillaire, in his treatise on teratology, or general and particular history of the anomalies of organization in men and animals, cites many cases. Last year (1885) the medical journals announced the birth in Spain of a little girl born without legs or arms, but healthy and of a good constitution. In Low Brittany we have seen, in 1875, amidst the crowd of beggars that lined both sides of a road leading to a little town called Saint Pol-de-Léon, a little girl of two or three years having no limbs stretched on a little straw. Her father and mother knelt at each side, told their beads, and murmured their prayers. The pennies fell abundantly into the wooden bowl placed near the little girl: the women believing the superstition of the country, that in giving to this little child they would preserve their future children from a like infirmity.

A certain number of trunk-men have exhibited themselves in public, and by their cleverness deserve their names to be handed to posterity. Thus an English writer, Stow, relates to have seen at London, in 1581, a Hollander who from birth had but two ends of arms, without hands, with which he used adroitly to throw a cup into the air, passing it from side to side, singing all the while. He threw an arrow at a mark with equal dexterity, used fire-arms, and handled the axe. Further, Stow says, "He drank every day ten pints of the best beer he could procure."

The famous Mathieu Buchinger, born at Anspach in 1674, came into the world without hands, feet, or legs. In place of arms, says a contemporary writer, "he had two excrescences which resembled more the fins of a fish than human arms, but which he used with much address. He wrote in a very readable fashion, used a fork or spoon in eating, and drank from a goblet," &c. The portrait of this individual is preserved in the British Museum in London. Notwithstanding his deformity, Buchinger was married four times.

In the middle of last century they exhibited in France, principally at the fair of St. Germain, a *soi-disant* Venetian girl who, having only trunks of arms, without hands, threaded a very fine needle, made a knot on thread with her tongue, sewed, spun, knitted, and cut with scissors all sorts of stuffs. She even played the violin.

About fifty years ago a "man-trunk" was celebrated in England, although he did not exhibit himself. He was a young lord, possessor of an immense fortune, and born without legs or arms. He received an excellent education, was gifted with much ability, and loved society. He was present at all the *fêtes* and receptions of the English aristocracy. In the drawing-rooms they installed him on an elevated stool, in a kind of basket with a cushion, on which he held himself upright. In spite of his deformity, this young man passionately loved horses and riding. They placed him on a saddle of special make, attached him by aid of a strap, the reins were then fixed to his shoulders, and he thus guided his animal.

Memberless men are thus not only curious examples of singular anomalies which one meets sometimes in the human species, but they show also how individuals, by force of patience, labour, and ingenuity, can supply the place of the organs which have been denied them.—Guyot Daubès (*specially translated for* Health *from* "*La Nature.*")

MEMORY. LOISETTE'S System of Memory Training. "Physiological and scientific in the highest degree."—Dr. Andrew Wilson. "The value of the fee returned to me twenty-fold."—Dr. Albert Carter (11th Nov., 1888). "Of great advantage to a strong memory; incalculable aid to a weak one."—Dr. J. M. Buckley. "Able to give the gist of any book after reading it once."—Rev. J. M. Macdonald, M.A. "Easily acquired and very interesting."—Rev. S. Bell, M.A. "Cure of mind wandering and increase of vocabulary."—J. Macgregor, M.A. "Top in examination."—T. Tait, M.A. Lessons by post or voice. Opinions of Mr. Proctor and of many members of the medical, &c., professions, Free.—**A. LOISETTE, 57, New Oxford-street, London.**

THROAT AND COUGH.

THE Throat and Windpipe are especially liable to Inflammation, causing soreness and dryness, tickling and irritation, inducing cough and affecting the voice. For these symptoms use

EPPS'S GLYCERINE JUJUBES.

In contact with the glands at the moment they are excited by the act of sucking, the glycerine in these agreeable confections becomes actively healing.

Only in boxes, 7½d., and tins, 1s. 1½d., labelled—

JAMES EPPS & CO., Homœopathic Chemists.

Indigestion—Constipation.

DAHL'S DYSPEPSIA CAKES.

Recommended by several Medical Men.

"You know what Mignonette means in the language of flowers, 'Your qualities exceed your charms.' This applies to the Cakes."—J. Milner Fothergill, M.D. In Boxes, 1s., 2s. 6d. Powdered Cakes, for delicate cases, 2s. 6d.

"THE CHILDREN'S BREAD"—Special Brand for Children, 2s.

OF ALL CHEMISTS.

DAHL'S AGENCY, 41, EASTCHEAP, LONDON.

Thomson's
COD LIVER OIL CREAM.

It is Invaluable as a Strengthening and Fattening Agent for DELICATE CHILDREN and INVALIDS generally.

Sample free. Bots., 2s. 3d., 4s., and 7s. 6d.; by post 3d. extra. Prepared by R. THOMSON, Chemist, 40, Dublin-street, Edinburgh.

London Agents: SANGER & SONS, 489, Oxford-st.

KEARSLEY'S WIDOW WELCH'S FEMALE PILLS have a reputation of over

ONE HUNDRED YEARS,

and are the acknowledged leading remedy for female complaints. They restore a healthy hue to the complexion, in place of the deathly pallor so distressing to witness. May be obtained of all Chemists, 2s. 9d. per box; or by post, 34 stamps, from SANGER & SONS, 489, Oxford-street, London.

TOOTH-ACHE
CURED INSTANTLY BY
BUNTER'S NERVINE

Prevents Decay. Saves Extraction. Sleepless Nights Prevented. Neuralgic Head-aches and all Nerve Pains removed by Bunter's Nervine.
All Chemists, 1s. 1½d.

BUNTER'S DENTINE

Is the most Simple & Durable Stopping for Decayed Teeth.

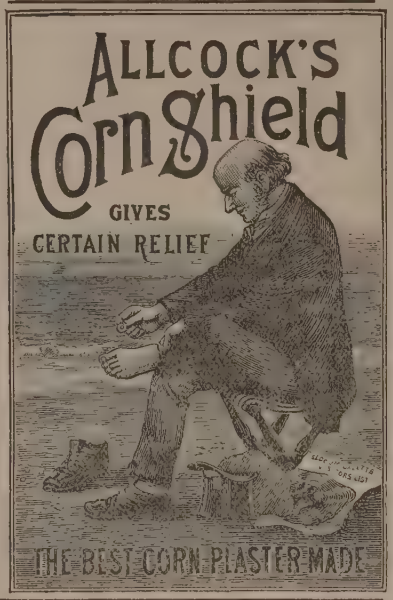
One can easily prepare and place it in the cavity of the Tooth in a soft state, and in a few hours it becomes a perfectly hard and white Enamel, forming as it were a part of the original substance of the Tooth. All Chemists, 1s. 6d.

Works by Dr. ANDREW WILSON, F.R.S.E.

LEISURE-TIME STUDIES, chiefly Biological. Second Edition, Crown 8vo, cloth extra, with Illustrations, 6s.

CHAPTERS ON EVOLUTION: A Popular History of the Darwinian and Allied Theories of Development. Second Edition. Crown 8vo, cloth extra, with 259 Illustrations, 7s. 6d.

LONDON:
CHATTO & WINDUS, 214, Piccadilly, W.



NOW READY.

CLOTH CASES FOR BINDING VOLUME XI.

OF

HEALTH.

PRICE TWO SHILLINGS.

INDEX FOR DITTO, PRICE TWOPENCE.

NOW READY VOLUME XI. OF

HEALTH.

Handsomely bound in cloth, price 7s. 6d.

Among hundreds of other interesting subjects treated in this Volume, Articles have appeared on the following —

DOES TOBACCO-SMOKING INJURE the EYESIGHT?
HOW TO CURE HEADACHES.
FASHION AND DEFORMITY IN THE FEET.
SHOULD WE SLEEP AFTER DINNER?
IS MODERATE DRINKING INJURIOUS?
THE USE OF ARSENIC BY WOMEN.
HOW TO TREAT WRINKLES.
EXECUTION BY ELECTRICITY.
A NEW FAT-CURE.
SLEEPLESSNESS AND ITS CURE.
HEALTHY MARRIAGE.
TIGHT-LACING IN EXCELSIS.

ALEXANDER P. WATT, 2, PATERNOSTER-SQUARE, LONDON, E.C.

"HYGIENIC"

WOOLLEN

UNDER-WEAR

For Ladies, Gentlemen, and Children.

Write for Illustrated Catalogue containing full particulars.

FORSYTH, Renfield-street, Glasgow.

Manufactured and Exhibited by us at the GLASGOW INTERNATIONAL EXHIBITION.

INTERESTING ARTICLES.

SETS of the BACK NUMBERS of "HEALTH," containing completed Serial Articles on various important Health Topics, may be had on remitting cost of the numbers and stamps for postage.

The following subjects are treated:—

SHALL I SMOKE? In No. 231.

IS SNUFF-TAKING UNHEALTHY? In No. 218.

SOME HINTS FOR THE CURE OF FATNESS. In Nos. 213, 225.

PALPITATION AND ITS TREATMENT. In No. 216.

SCARLET FEVER. In Nos. 220, 230, 232.

DRESS AND UNDRESS. In Nos. 216, 217.

NURSING. In Nos. 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219.

HATS AS A CAUSE OF BALDNESS. In No. 215.

HOUSE CONSTRUCTION IN RELATION TO HEALTH. In Nos. 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234.

HEALTHY HOLIDAYS. In Nos. 223, 224, 225, 226, 227, 229, 230.

SLEEP WALKING. In Nos. 72, 73, 74, 75, 77, 79, 80.

INFANTS. In Nos. 100, 101, 102, 103, 104, 105, 106, 107.

PHYSICAL TRAINING FOR CHILDREN. In Nos. 94, 95, 96, 97, 98, 118, 119, 120, 121, 122, 123.

TRICYCLES, AND THEIR RELATION TO HEALTH. In Nos. 61, 63, 64, 65, 66, 68, 70, 71, 73, 74, 76, 78.

DIGESTION. In Nos. 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105.

WHAT TO DO WHEN FEVER INVADES THE HOUSE. In Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.

THE HAIR, SKIN, AND TEETH. In Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14.

BURIED ALIVE. In Nos. 154, 155, 156, 157, 158, 159, 161, 163, 164.

HYDROPHOBIA: ITS NATURE, CAUSES, AND TREATMENT. In Nos. 20, 21, 23, 24, 25, 26.

CALISTHENICS. In Nos. 44, 45, 46, 47, 48, 49, 51, 52, 54, 59, 61, 62.

ECONOMICAL MEALS. In Nos. 48, 49, 50, 51, 52, 53, 54, 55, 56.

PUBLIC PARKS AND OPEN SPACES. In Nos. 57, 58, 60, 62, 64, 66, 71, 74, 76.

The price of numbers 1–156 has been increased to 4d. each, as, in consequence of the great demand for them, they are now nearly out of print. Nos. 157 to date may be had, price 2d. each.

LONDON: A. P. WATT, 2, PATERNOSTER-SQUARE, E.C.

NOT FARINACEOUS. MELLIN'S FOOD.

MELLIN'S FOOD for INFANTS and INVALIDS.

An artificial substitute for Mother's Milk for Infants, and a Perfect Food for Invalids. This Food is prepared from the soluble extracts of cereal grains, and, unlike the "Farinaceous Foods," is perfectly **FREE FROM STARCH.** It is a well known physiological fact that starchy substances cannot be digested by young children, the natural food of an infant—Mother's Milk—contains no starch, no provision is made by nature, therefore, in the case of infants for the digestion of that body. The ferments of saliva and pancreatic juice, which later become the actual agents in converting starch into grape sugar, are wanting. MELLIN'S FOOD, being free from starch, and rich in soluble Carbohydrates, Albuminoids, Phosphates, Potash, and other blood salts, forms a perfect food for young children.

MELLIN'S

LACTO-GLYCOSE

OR

MILK FOOD.

Price 2s. and 3s. per Bottle.

In this preparation Milk is incorporated with the Food in the process of manufacture, thus making it specially suitable where a difficulty exists in procuring fresh cows' milk, as, for instance, on board ship and in hot climates.

Sample and Prospectus on application to the Inventor and Manufacturer,

G. MELLIN, Marlboro' Works, Peckham, S.E.

Jottings from the Journals

" Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Age and Disease.—There are other diseases which, like pneumonia, cause the greatest number of deaths in early life, but are the source of the greatest danger in advanced life. Of the deaths from measles, over 90 per cent. occur in children under five years old; but the attacks are numerous rather than dangerous. The contrary holds later on, when the danger of the disease increases together with its rarity. You will remember that Major Pendennis excused himself from visiting his sick nephew on the ground that his illness might be measles: " He had never himself had the measles; they were dangerous when contracted at his age." Diphtheria, like measles, is most frequent in early life; but, unlike measles, it is now not less dangerous than afterwards, but is probably more so; for with children it is especially apt to take the form and name of membranous croup, which is one of the most fatal diseases to which children are liable. With regard to the continued fevers the case somewhat differs. These disorders are more dangerous in advanced life than earlier; in childhood, at least in early childhood, they are less frequent as well as less dangerous than later. Typhus seldom presents itself in childhood, and then carries little risk. According to Dr. Murchison, typhus is most frequent between thirty and forty; it kills most after fifty. Under ten the mortality of typhus is but 3·27 per cent. of those attacked; after fifty the mortality is 57·03. A distinguished physician became aware that he had caught this disease; his friends sought to lessen his apprehensions, but he said, " I know what typhus means after sixty," and his anticipations were verified. Typhoid, according to Murchison, is most common between twenty and thirty, and kills most within this decade. The danger of typhoid, however, presents less variation with age than does that of typhus; it varies in the same manner, but not to the same degree. Under ten it kills 11·36 per cent. of those attacked; over fifty 34·94 per cent. Typhoid is so rare in infancy that under two it need scarcely embarrass our diagnosis. Murchison once ascertained by post-mortem that this disease had existed at the age of six months; and I once was assured of its presence by a most unequivocal eruption in a child of between two and three years old, whose symptoms, chiefly cerebral, delirium, and screaming pain in the head, had presented an apparently hopeless prognosis in the way of meningitis. But, as a rule, typhoid, though a disease of childhood, is not one of infancy.—*Dr. Dickinson.*

✪ ✪ ✪

The Indian Woman's Life.—In the average Indian family the strictest domestic economy is the rule of life, and the household work is done by the women of the household, not, as with us, by paid servants. Servants there are, of course, in all Indian families, but they are, as a rule, on a totally different footing from the European domestic, being for the most part independent persons with a *clientèle*, for whom they perform certain customary services for a customary wage. The distribution of the daily work, down to that of the most menial kind, lies with the *materfamilias*, who may be best described as the oldest woman in the family proper under coverture, for widows can have no authority. The cooking, as the work of honour, she keeps to herself, but the house-cleaning, the washing, the care of the children, the drawing of the water, the making of the beds, and so on, is done by the less dignified members of the household, as she directs; and whatever is most menial, most disagreeable, and the hardest work, is thrust upon the bride. She is servant of the very servants, and must obey everybody. It is hardly, therefore, to be wondered at that, after her previous training, it is by no means an uncommon occurrence that she has to be forcibly broken into her new way of life, that she is for ever sighing after the flesh-pots of her father's house, that there are various " customs " which enable her to revisit it at stated times after the marriage, and that the law is often invoked to oblige brides to return to their husbands' families after the customary term of such visits has expired. Not only is our bride thus turned into a drudge, often unmercifully overworked, but from the day she gives up her childhood to the day of her death,—it may be for sixty years,—she is secluded, and sees nothing of the world outside the walls of her family inclosure. It should always, therefore, be borne in mind, when trying to realize Indian female life, what a very important thing the domestic economy is to a woman; how largely the petty affairs of the household loom upon her horizon. Her happiness or misery, indeed, entirely depend on the manner in which the affairs of the family are conducted. Now, considering that the female mind has for centuries been mainly directed to this all-important matter, it is not astonishing to find that such questions as the proper method of eating and drinking, and of domestic propriety generally,—the intercourse, that is, which is permissible and right between the various members of the household, male and female,—have long been regulated with the utmost minuteness. To us who roam the world at will, and whose interests are often fixed far more outside than inside our homes, it may seem remarkable that such infinitesimal restrictions and numberless customs as are found in full swing in an orthodox Hindoo household should be remembered and carried out with the exactitude demanded of the womenkind; but if we consider that these make up their whole life, and that they are called upon to pay attention to nothing else, their capacity for recollecting when to veil and unveil, whom to address and avoid, when they must run away, and when they may speak, ceases to be extraordinary. And regarding these customs of social propriety, I must say that the more one studies them the more one is impressed with their perverted ingenuity. They seem purposely invented to make the unfortunate victim of them as uncomfortable as possible. The Indian woman, isolated from the outer world by custom, is again by custom isolated as far as practicable from all the male members of that little inner world to which she is confined. Free intercourse, even with her own husband, is not permitted her while yet her youthful capabilities for joyousness exist. No wonder, then, that absence of jollity is a characteristic of the Indians generally, for the happy laughter of a home is denied them by custom in the most persistent manner.—*Captain Temple.*

✪ ✪ ✪

Polyandry.—The form of polygamy with which we are most familiar is that where the husband has more wives than one. Amongst some nations in a more or less uncivilized state, it is, indeed, as much the custom as monogamy is in civilized countries. Another form of polygamy, where the woman has more than one husband, called polyandry, exists in several parts of the world widely separated from each other. Thus, it has been

found among the people inhabiting the centre of Ceylon; among the Todas and Nairs of Southern India; among the Iroquois Indians of America; among the aboriginal inhabitants of Tasmania, before they became extinct; and it is found to be especially prevalent among the inhabitants of Tibet. As practised in the latter country, it seems to differ from the custom in other countries where it occurs, in that the husbands are brothers or nearly related kinsmen, so that the woman becomes the wife of a whole family. Instances where as many as five or six brothers have one wife in common to all of them, have been recorded; but in most cases a woman has not more than two or three husbands. The choice of a wife for the family is the right of the eldest brother, whose marriage contract involves contracts with all his brothers. The children are regarded as the common property of the house, and all the husbands are treated as their fathers without distinction. The custom appears to work peaceably and well, and is practised by all classes of the community. The effect of its existence is that there is a large surplus female population, who are provided for in nunneries, where they learn to read and copy the Tibetan Scriptures, and are otherwise engaged in religious services. It seems to prevail wherever the Tibetan language is spoken, even in districts on the Indian side of the mountain boundaries of the country, though, in places where the people have come much in contact with Hindus and Mahomedans, the reverse form, —plurality of wives,—is also to be found. The system is said to have existed since pre-historic times, so that the cause of its origin is speculative. It seems to be in no way connected with the Tibetan religion. The suggestion has been made that it arose in troubled times, when men were forced to be absent from home for long periods, and the defence of their wives and families devolved on the younger brothers left behind. The view which most travellers seem to adopt is that it owes its origin to the poverty of the country and the desire to limit the population. The custom may possibly be another form of that which existed in Biblical times, where it was the duty of the younger brother, in the event of his elder brother leaving children, to marry the wife of his deceased brother.—*British Medical Journal.*

✣ ✣ ✣

Music in Medicine. — From the time when medical knowledge was first embodied in rules of practice, and probably from a much earlier period, music has held a recognized place in the treatment of disease. Though lauded in connection with the most diverse maladies—for example, with gout and insanity—it has for obvious reasons been chiefly effective in dealing with certain forms of nervous disease. This is only what one would expect from its natural action. It cannot be named along with many drugs in point of apparent accuracy of result. Its place is not in any ordinary catalogue or pharmacopœia. It belongs rather to that group of natural recreative forces which are active in every healthy life, and which operate against the morbid weakness of any part by increasing the vigour of the whole. In so far as it affects the body, it must clearly do so only through the mind and the nervous system. This accounts for its known value in the treatment of mental disorders. Nor can its obscurer action in different physical states be otherwise explained. By acting as a refreshing mental stimulant and restorative it braces the depressed nervous tone and indirectly that of the other tissues. Thus there is something to be said for the old custom of exorcising pestilences by the sounds of music. Calmed and inspired by harmony, the tonic energies of will and nerve combined to oppose a wholesome bodily tone to the invading scourge, and to prevent that tissue laxity which has often provided the nidus of disease. A similar process is relied on by those who turn to music among other diversions for some relief from the pain of a tonic neuralgia. In no class of diseases, however, are we likely to derive so much benefit from the use of so pleasant a remedy as in those affecting the mind itself. In melancholia and allied states of depression its value is generally admitted in our own day. Ancient practitioners were also cognizant of its usefulness in this respect. We must all have felt how suitable is its infinite variety and facility of expression to the changing moods of the sane, and it is, therefore, the less difficult to understand how straying minds are pleased by its charm. Certain it is that its beneficial effect is in this case considerable, and our readers, though possibly unable to acquire a knowledge of the art, should at least possess, and if needful assert in practice, a sense of its therapeutic value.—*Lancet.*

Magazines for the Month.—*Harper's Magazine* for December forms the Christmas number of that periodical. On the present occasion it excels itself, by reason of the choice nature of the literary and artistic fare it presents. Mr. Walter Besant's story, "The Last Mass," is sure to attract readers; and other seasonable contributions are represented by Mr. Howell's farce, "A Likely Story," and by "Sosrus Dismal," by W. W. Archer. "The Editor's Drawer" is bright and lively as usual; and of the illustrations, it is perhaps needless to say more than that they are all of "Harper's usual excellence." "The Viking's Daughter" is a very tender piece of figure painting, and forms an admirable frontispiece to the number. Messrs. Cassell & Co. send us Part II. of the new serial issue of the *Popular Educator*, a most excellent educational work. The *Countries of the World* is in the 55th part of its serial issue, while the *Illustrated History of England* is in its 26th part.

Plane Tree Pollen Causing Influenza.—A German resident of Barcelona recently published the fact that severe attacks of influenza—exactly like those which we call in this country "rose" or "hay colds"—have afflicted the members of his family year by year in spring, and that he has at last traced them with certainty to pollen dust from the plane trees which surround his home. A German scientific journal thereupon declares that the evil influence of plane tree pollen upon the stomach, throat, eyes, and ears was a well-known fact in antiquity, both Dioscorides and Galen having called attention to it. That German scientific men will acknowledge that an influenza may be produced by pollen dust of any kind will surprise many American travellers; for many must remember their experience with German physicians, who have laughed the idea to scorn, refusing to believe in the periodicity of the attacks from which their foreign patients suffer, or in the potency of the cause to which those patients attribute them.

Fourth Edition.—Now Ready.

"*A Book every Young Man should read.*"

A Lecture to Young Men on Purity of Life and the Preservation of Health, by A Graduate. Price One Shilling, or post-free, 1s. 1d., from Henry Renshaw, Medical Publisher, 356, Strand, London, W.C.

A complete refutation of quackery of all kinds, and a safe and reliable guide, from the medical standpoint, to all young men. Every youth should read this pamphlet as a guide to the safe conduct of life in a moral and physical sense. Full directions for the treatment of Nervous Debility so-called, and allied ailments, are also given. Thousands of sufferers have welcomed this pamphlet as a veritable beacon-light to health and purity of life.

Sanitary Appliances, Etc.

MESSRS. PULVERMACHER'S GALVANIC APPLIANCES.

FROM Messrs. Pulvermacher, the well-known electricians, of 194, Regent-street, London, W., we have received a sample of a very portable and handy case of their galvanic appliances, fitted in a leather case, and containing a complete set of belts with a powerful battery suitable for the personal application of electricity as an agent for the relief of pain and the cure of ailments. This neat and handy set of galvanic appliances strikes us as supplying a want, inasmuch as its possessor can take the case with him when journeying from home, and the treatment is thus capable of being carried on in an uninterrupted fashion. As a suitable Christmas present to any sufferer from rheumatic troubles, neuralgia, or debility at large, Messrs. Pulvermacher's compact little case strikes us as being extremely appropriate. It may not be out of place to recall to the minds of our readers that long ago in the history of HEALTH, the appliances under notice were tested for us by Mr. Lant Carpenter and others, and were shown to be genuine instruments for the production of electrical currents. This testimony on our part only repeated the opinions of some of the most distinguished London and foreign physicians, including three of the physicians to her Majesty the Queen. The inventor has had the full experience and scientific training so necessary to a successful medical galvanist, and the construction of the appliances sold at No. 194, Regent-street have absorbed the best part of a long lifetime devoted to the study of electrical phenomena.

From many foreign medical men and colleges, Mr. Pulvermacher has received flattering testimony to the value of his appliances in the cure of nervous and other ailments, and Professor Oppolzer, chief physician of the Imperial Hospital of Vienna, and physician to the Emperor of Austria, is one of the strongest advocates of the excellence of the appliances made by this firm. Perhaps the best evidence of our own belief in the value of Messrs. Pulvermacher's appliances may be found in the fact that from the first we have recommended them in the pages of this journal devoted to correspondence. Personally, we know that they have been effectual in curing many cases of rheumatism and allied disorders, while in all cases of nervous weakness their virtues have been testified to by numberless correspondents. We can add no higher praise than to say that we are now as perfectly satisfied with Messrs. Pulvermacher's appliances as when they were first brought under our notice.

POPULATION OF ST. PETERSBURG.—The population of St. Petersburg entitles it to rank as the fourth European city, London, Paris, and Berlin being the only cities that in this respect can claim precedence to it. A census of the population of St. Petersburg taken at the end of June last resulted in the enumeration of 842,883 persons, showing a decline of 85,133, or more than 10 per cent., from the enumerated number at the previous census in 1881. It should be stated that the census in 1881 was taken in the winter, which, it is urged, partially accounts for the decline of population. It would appear to be somewhat doubtful, however, whether the population of St. Petersburg is larger in winter than in summer, for it is admitted that the census number enumerated in June last includes 41,696 workmen from the provinces engaged on building works which can only be carried on in the summer. That the population of the city is declining has long been admitted, moreover, by the municipal authorities. A noticeable feature of the St. Petersburg population is the excess of males, in striking contrast to the excess of females in nearly all other European cities. Of the population enumerated in June last, the males were in the proportion of 138 to 100 females; and, of persons aged upwards of sixteen years, the males were as 146 to 100 females. In this remarkable excess of males the sex proportion of the St. Petersburg population somewhat resembles that of the great Indian cities, where the males almost invariably show a large excess. In the population of London, enumerated at the last census, in 1881, the males were but 89 to each 100 of females.

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. All questions are answered free of charge in the columns of HEALTH. A limited space only, is available for the insertion of replies each week.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

LETTERS TO THE EDITOR.

SACCHARIN.

SIR,—In your issue of the 26th October last you gave prominence to a statement to the effect that Coal Tar Saccharin is injurious to the human system. The origin of this statement is doubtless traceable to the report issued by the Commission appointed by the *Conseil d'Hygiène et de Salubrité de la France* to inquire into the properties of Saccharin, and also to the remarks made by Dr. Worms at a meeting of the Académie de Médecine in Paris on 10th April last. I respectfully submit (1) that the above report is objected to by all prominent men of science outside France who have been consulted in the matter, and who, indeed, express themselves in terms diametrically opposed to those contained in the report, and, further, that the Government of France have not felt themselves impelled to take any action in consequence of the said report. (2) That the words of Dr. Worms have become magnified and distorted by the French press until they no longer represent what he did say (*vide* his letter to the *Lancet* of the 10th inst.). (3) That this distortion is malicious, and is dictated by the fears of the French sugar industry lest sugar should be displaced (see the *Courrier de Lyons* of 28th August last, in which this charge is unhesitatingly made). (4) That the words of Dr. Worms as uttered are opposed to the views of such authorities as Dr. Gavy, Dr. Stevenson, and others. (5) That Dr. Worms does not occupy a high position in the scientific world as compared with those who differ from him upon this question, and that no medical man outside France has ever publicly declared himself against the use of Saccharin.

I have delayed replying to the charges which have been made against Saccharin pending the completion of experiments impartially conducted, with a view to test their veracity. Had they been confirmed I should have discontinued the production or sale of Saccharin. In view, however, of the fact that the highest authorities in the world now deny that Saccharin exercises any harmful influence upon the system, I feel that I shall not appeal in vain to your sense of justice in asking you, after perusal of the enclosed pamphlet, to give as great a publicity to the contradiction as you have done to the assertion that Saccharin acts injuriously upon the human system.—Yours obediently,

Salbke, Westerlüisen,
27th Nov. 1888.

DR. CONST. FAHLBERG
(*Discoverer of Saccharin*).

[We agree with all Dr. Fahlberg says, and have always maintained the harmlessness and utility of Saccharin. As the question

"ELECTRICITY IS LIFE."
(TRADE MARK.)

PULVERMACHER'S

WORLD-FAMED

GALVANIC BELTS,

FOR the CURE of NERVOUS DISEASES.
HAVE RECEIVED TESTIMONIALS from
THREE PHYSICIANS to
HER MAJESTY the QUEEN,
THE ACADÉMIE DE MÉDECINE of Paris and
FORTY MEMBERS of the
ROYAL COLLEGE of PHYSICIANS of LONDON.

RECENT TESTIMONIALS.

GALVANISM *v.* DIFFICULTY OF BREATHING and SLUGGISH CIRCULATION.

Windsor-street, Liverpool, 20th November, 1888.

Dear Sirs.—I am happy to tell you that the benefit so far derived from your treatment has by far exceeded my expectations. My respiration is easier, my circulation has greatly improved, and I now feel very cheerful. The respiration has wonderfully improved, and I am confident that I shall owe my complete recovery to your grand invention.—Yours very truly,
M. FAUKE.

Messrs. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* INDIGESTION and NERVOUS DEBILITY.

Spofforth, Wetherby, 19th November, 1888.

Sir,—I have received great benefit from wearing your Galvanic Belt. My digestion is better, and I have gained strength and weight. I shall have much pleasure in recommending your treatment to any one who may be suffering like myself,—Yours respectfully,
W. SEAVERS.

Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* RHEUMATISM.

Vicarage-street, Nuneaton, 15th November, 1888.

Dear Sir,—Before I purchased your Galvanic Belt I had been six weeks at home, and could not walk. But after wearing your 40s. Belt for Rheumatism I began to get gradually better, and in a few weeks I could walk round the house as I never thought I should again, and the pain left me so that I could go to work.—Yours faithfully,
T. SMITH.

Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* SCIATICA.

Cleator Moor, Whitehaven, 13th November, 1888.

Gentlemen,—I am happy to inform you that since wearing your Galvanic Belt the sciatica is so much better that I have now no need to wear the appliance.—Yours truly,
J. NEESHAM.

Messrs. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

St. Peter-street, Ipswich, October 29th, 1888.

Dear Mr. Pulvermacher,—I have just received a very gratifying letter from a lady patient who, under my advice, adopted your treatment. For years past this lady has devoted her life to the management of a large orphanage, but owing to the severe mental strain and anxiety connected with it her health quite broke down, and she was unable to attend to her duties.

She now writes to me: "I am truly thankful to tell, and I know you will be glad to hear, that I have derived great benefit from the Pulvermacher Belts you sent me, so much so that I have been able to take up my full work again, and even to add to it, by the opening of a new branch home for the children."—Yours very sincerely,
ROBERT SEAGER.

J. L. Pulvermacher, Esq., 194, Regent-street, W.

GALVANISM *v.* RHEUMATISM.

Fyvie, Aberdeenshire, Oct. 27th, 1888.

Dear Sir,—I want you to send me a Galvanic Belt for a friend, and, with regard to my own case, I may mention that on the arrival of the Combined Band, on Friday, the 12th inst., I had it immediately applied as directed, with the astonishing and comfortable result that the following morning my rheumatism was gone, and I have not felt anything of it since.—Very gratefully yours,
THOMAS GRANT.

Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

Sandy-street, Newry, 25th October, 1888.

Gentlemen,—I am happy to tell you that I am now quite restored to my usual health and strength, thanks to your Galvanic Appliances.—Yours sincerely,
J. TAYLOR.

Messrs. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

The distressing symptoms of Nervous Exhaustion and Debility are speedily removed by means of PULVERMACHER'S world-famed GALVANIC BELTS, which are so arranged as to convey a powerful electric current direct to the affected parts, gradually stimulating and strengthening all the nerves and muscles, and speedily arresting all symptoms of waste and decay.

ADVICE PERSONALLY or by LETTER, free of charge.

FOR FURTHER TESTIMONIALS, both Medical and Private, see new Pamphlet, "GALVANISM: NATURE'S CHIEF RESTORER OF IMPAIRED VITAL ENERGY," post free on application to

J. L. PULVERMACHER AND CO.,
GALVANIC ESTABLISHMENT,
194, REGENT-STREET, LONDON, W.
(ESTABLISHED OVER FORTY YEARS.)

of its harmlessness was raised, however, we deemed it only advisable and just to ventilate the subject, on the clear principle that the elucidation of the truth was to be promoted by free discussion. In our present issue we give, in "Notes by the Way," the opinions of high chemical and medical authorities regarding Saccharin. Dr. Fahlberg's pamphlet is also conclusive in its argument, and probably we shall hear nothing more of the allegation that Saccharin is in any way injurious.—ED. H.]

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and *not to the Editor*.]

HENRY GROOM.—1. Consult the advertising pages of the *Lancet* or *British Medical Journal*, and you will find announcements of books on the subject, and of those who profess to cure the defect. 2. Feebleness of the circulation. Take a dessertspoonful of Scott's Pure Cod Oil Emulsion, after your meals, thrice daily, and wear warm underclothing, such as that supplied by Mr. Forsyth, 13, Renfield-street, Glasgow.

OMEGA.—1. Certainly not; for health a man requires to take from fifty-two to sixty ounces of water, in one form or another, daily. 2. White boiled fish, taken with butter-sauce to supply fat, is very nutritious. 3. Both are good.

EXPERIMENTIA.—1. Brush your teeth night and morning carefully with tepid water and camphorated chalk, and wash out the mouth after meals with the mouth-wash sold by Bayley, 17, Cockspur-street, Pall-mall, London, S.W. A little tincture of myrrh, dissolved in water, also makes an agreeable mouth-wash. 2. You must regulate your diet. See advice to "One in Trouble" in last week's HEALTH. 3. Bayley's Spermaceti Soap.

W. J. RICHARDSON.—You could not invest your money to better purpose than by purchasing Cassell's "Family Physician." The "Book of Health" deals more exclusively with sanitary matters than with personal health.

DEW.—Apply at night to the corn some Salicylic Cream by way of softening the skin-tissues, and then cautiously pare the corn in the morning. Repeat this process as often as needed, and, above all, beware of wearing thin stockings. Wear a woollen sole inside your boot, to avoid pressure on the corn, or wear thick stockings, and examine your boots. One pair of boots is often found to cause corns, whereas another pair relieves them.

CHARLES B.—The formula you want is as follows: Liquor ammonia (strong), chloroform and oil of jasmin, of each, half an ounce; castor oil, half a drachm; spirits of rosemary, to make up four ounces. Keep in a stoppered bottle, and label: "A little to be cautiously rubbed into the hair each morning." Use also, at night, a little of an ointment composed of Lanolin, two drachms; and oil of jasmine, half a drachm. The use of the ointment at night will prepare the hair-roots for the action of the lotion in the morning.

A. S.—Try fifteen drops Fer Bravais taken in water between your meals, thrice daily; and at night inhale the vapour arising from a pint of very hot water to which Sanitas Fluid has been added. It is probable a teaspoonful of Scott's Pure Cod Oil Emulsion, taken thrice daily, after food, would assist your cure. Write again, if not bettered.

NETTA.—Take the following pill: Powdered ipecacuanha, half a grain; powdered capsicum, one grain; powdered rhubarb, two grains; extract of gentian, three grains. Six such pills to be made, and one to be taken half an hour before dinner when there is any liver-irritation.

M.A.—Read the pamphlet, "A Lecture to Young Men" (post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.), and attend to the directions there given.

NO.—The following may be used for the cure of freckles:—Sulpho-carbonate of lime, two ounces; glycerine and rose water, of each twenty-five ounces; alcohol five ounces. Mix. Wash the skin twice in twenty-four hours, letting it remain damp with the lotion for half an hour.

ALTER EGO.—Read the Ambulance Handbook—"Common Accidents, and How to treat them"—by Dr. Andrew Wilson, and others, price 1s. 2d. post free from Chatto & Windus, 214, Piccadilly, London, W., or order of any bookseller.

C. S.—Use the "Pommade Trichophile" of the French Hygienic Society, 56, Conduit-street, Regent-street, London, W. (advertised in our pages); it is an excellent remedy for scurf. Wash the hair once a week with Bayley's Soap.

Abel.—We should say Pye Chavasse's "Advice to a Wife," and "Advice to a Mother" (Churchill), "The Ladies' Physician" (Cassell), and "The Young Wife's Own Book" (Griffith & Farran), would suit you.

Servant.—A remedy for flatulence and offensive breath, arising from digestive disturbance, is as follows:—Carbonate of bismuth, ten grains; wood charcoal, ten grains; bicarbonate of soda, five grains. Mix. One such powder to be taken thrice daily, half an hour before meals.

L. F.—Cut the hair short over the parts affected, or shave it away as completely as you can, and apply an ointment, to be compounded as follows:—Lanolin, zinc oxide, and vaseline, of each two drachms; resorcin, one drachm. Mix, and label, "Apply night and morning to the part.

T. Parker.—Fit up one of Twyford's "Unitas" Closets and you will find your nuisance to disappear. See also that there is an efficient trap at your drain outlet, by way of disconnecting your house from the main drain or sewer.

S. E. P.—Take five drops of Pure Terebene on a piece of sugar after meals when the symptoms you name trouble you. Clothe warmly in Forsyth's Woollen Underclothing, and try taking a dessertspoonful of Scott's Pure Cod Oil Emulsion after food. These means will enable you to ward off lung ailments at large.

Loxa.—Take plenty of out-door exercise, use a cold sponge bath each morning, avoid alcohol, salted foods, pastry, &c., and let your diet be plain in character. You do not require either tonics or other drugs. You are quite healthy, and only quacks will tell you differently.

Bee.—All the symptoms you name indicate some affection of internal organs. Consult a competent physician in your city accustomed to treat such ailments. We can send you addresses of physicians, if you desire it.

B. C.—Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and learn therein the true rules of health.

A. Morrison.—Take more open-air exercise, and use a rough towel to your face after washing. Use Bayley's Spermaceti Soap only, and if blackheads are present press them out, and sponge the parts thereafter with Bayley's Lavender Water (17, Cockspur-street, Pall-mall, London, S.W.).

Frip.—Consult the French Hygienic Society, 6, Conduit-street, London, W., and use their Pommade Trichophile for the cure of scurf. This society will also be able to advise you regarding the use of a harmless dye or restorative for grey hair.

Ellen G.—You must exercise care in your diet. Avoid vegetables for a time, and take Brand's Beef Essence and like foods, and white boiled fish; milk (peptonized with Fairchild's Powders) should also be taken, while Van Houten's Cocoa should be taken in preference to tea and coffee. Rest after your meals as a necessary rule of health. Why do you take bicarbonate of soda at all? Try Vichy Pastilles instead. If not cured, write again.

A. B. R.—Try the effect of dusting Woolley's Sanitary Rose Powder on the feet, under the armpits, &c., after washing. We should also recommend Calvert's Carbolic Soap or Coal Tar Soap to be used for washing the body, and of course the clothes should be frequently changed.

E. Freeman.—Apply a little boracic ointment to the parts night and morning, and internally take a teaspoonful of the Easton's Syrup (Seller's) after your meals, in a wineglass of water, twice daily.

Elgin.—If the tonic you are taking now does not suit, try the Vin Mariani (Roberts & Co., chemists, New Bond-street, London, W.) after meals twice daily.

N. Emmett.—The preparations of Messrs. Loeflund & Co., 148½, Fenchurch-street, London, E.C., would suit the child admirably. Try their Cream Milk and the Cream Emulsion.

Italia.—Try Dahl's Cakes, and take a Cascara Tabloid or two (Messrs. Burroughs, Wellcome & Co.'s). Take Scott's Midlothian Oat Flour in place of tea and coffee night and morning, and you will find this diet cure you. For the rest, take plenty of fruits and vegetables.

Maggie.—Give the Soden Mineral Pastilles a trial (see advt. in our pages). They are excellent for all throat-ailments.

Frank Hardie.—Take Cascara Cordial, twenty drops in half a wineglass of water, or a Tabloid, once or twice daily, an hour before meals; avoid fatty foods, and let your diet consist of Grant's Oat Flour, milk, milk-puddings, white boiled fish, meat (occasionally only, for a time), stewed fruits, stale bread, &c.

O. P.—Superfluous hairs can only be satisfactorily removed by electrical means. Read the article on this subject in Health, No. 149. We can send, if desired, on receipt of stamped addressed envelope, address of a specialist who removes hairs in this way.

Cincturas.—For your hair-weakness use the following lotion: Solution of ammonia, half an ounce; tincture of cantharides, half an ounce; eau de Cologne, one ounce; water, to eight ounces. Rub into the roots morning and night with a soft sponge.

CORROBORATIVE EVIDENCE.

It is easy to make assertions, but often difficult to prove them. People now-a-days demand a verification of any statement that may be made, and it is right that they should. For months the columns of this paper have contained the most extraordinary statements, made by the proprietors of a much advertised article as to the merits of their remedy. To-day they present the testimony of our neighbours and friends in verification of what they have asserted in the past. Such testimony must be accepted and respected because it comes from people living right here in Surrey, where the truth of their statements can be easily verified. The following are published with the hope that the fullest investigation will be made by the public.

Mr. D. Mills, 2, Drakefield-road, Hatcham.—"I have found great benefit from disease by the use of 'Warner's Safe Cure.'"

Mr. J. Prior, 244, Brockley-road, Brockley, S.E.—"I have been cured of indigestion, caused by sluggish liver, by the use of 'Warner's Safe Cure.'"

Mr. J. A. Piccaver, 140, Stockwell Park-road, Brixton.—"Having been saved from a premature grave by the use of 'Warner's Safe Cure,' I am anxious the world should know of its efficacy in curing Bright's disease."

Mr. E. Henry, 128, Hither-green, Lewisham.—"After a long spell of sickness, I have been restored to vigorous health by the use of 'Warner's Safe Cure.'"

Mrs. Merrita Cox, 125, Albert-road, Peckham.—"I cannot express my gratitude for the benefit I have derived from 'Warner's Safe Cure.'"

Mr. Emanuel Beebee, 47, Haymerle-road, Peckham.—"I suffered from stone in the bladder, and was told by my medical man that I must go to the hospital and have it cut out; I took 'Warner's Safe Cure,' and was cured."

Statements like the above ought to be convincing; but if you still doubt, write to any of the above, or all of them, enclosing stamp for reply, when full particulars will be sent you. If you are feeling unwell and are ignorant of the cause, write Warner & Co. for Treatment Blank and have your case diagnosed free of expense.

"Warner's Safe Cure" can be had of all chemists and medicine vendors in the United Kingdom, at 4s. 6d. per bottle, or of H. H. Warner and Co., 86, Clerkenwell-road, London, E.C.

Rufus.—1. It is probable that Easton's Syrup would suit you better than the tonic you name, as it contains no sugar of any kind. Try it in a teaspoonful-dose, in a wineglass of water, twice daily, after meals. Use Seller's preparation, advertised in our pages. 2. Try Marshall's Ptyaloid, by all means. 3. Not lowering if taken in half the dose you name. Glad to be of any further service.

M. V.—1. We do not understand your first query; but, assuming you write as a married person, we can only reply that constitutions and dispositions differ. There is no fixed rule regarding the matter. All depends on state of health, work, and personal inclination. 2. Mother Siegel's Syrup may certainly be taken by you. It is an excellent family medicine.

Farmer's Boy.—1. Leave off drinking coffee and tea, and substitute Grant's Scottish Oat Flour for these beverages. Apply to the irritated parts a lotion composed of half Hazeline and half water twice or thrice daily. You can use the Hazeline pure if it has no effect diluted. 2. You are very foolish to talk about having no self-command. You have only to "will" to effect your cure in the habit you name, and the thing is accomplished. Don't be so foolish as to allow any habit to enslave your manhood. Make a resolve,—and keep it. That is your sole and only needed means of cure. Disease you have none, and your moral weakness can be overcome. Simply, for the rest, attend to your general health. Plenty of outdoor exercise and a tepid bath each morning will assist you physically.

D. W.—Any surgeon will relieve your mind, and put right whatever may be wrong in a few minutes without pain. Go to a respectable medical man in your town (steer clear of quacks), and you will be cured at once. Such cases are very common.

Ely Vale.—Take the Easton's Syrup, as recommended to "Rufus" in the present number of Health, as a suitable tonic for you; and sponge the parts night and morning with cold water. If this treatment does not cure you, write again.

JINKS.—Inhale, at bedtime, the vapour of a pint of hot water to which Sanitas has been added. After your meals take a dessertspoonful of Thomson's Cod Oil Cream (advertised in our pages) thrice daily, as a general strengthening measure. If you have sufficient reaction, cold sponging to the chest will also be found useful each morning.

C. P. G.—Apply to Mr. Pulvermacher, 194, Regent-street, W. See notice of his appliances in the present issue.

Nervousness

Horsford's Acid Phosphate,

A NERVE FOOD.

Nervous diseases are often due to a diminution of the phosphates which exist in every fibre. The Acid Phosphate supplies the phosphates, and relieves nervous exhaustion.

Dr. C. J. DENNY, M.R.C.S., Blackwater, Hants, says: "I prescribed it in cases where the chief faults of health appeared to be want of nerve nutrition, with marked benefit."

Dr. SPENCER T. SMYTH, L.R.C.P., Forest-hill, Tyson-road, London, says:—"I have given it in nervous disorders where phosphoric acid is indicated, particularly in cases of nerve prostration, and find it a valuable remedy."

Descriptive Pamphlet post free on application to

Rumford Chemical Works,
Providence, R.I., U.S.A.

Beware of Substitutes and Imitations.

BROADFOOT. — Horsford's Acid Phosphate may certainly be tried by you. It is an admirable tonic. Apply to your druggist for it.

EDWARD RAY.—The child suffers from a form of hernia. Have a Xylonite Truss fitted by the Medical Battery Company, 52, Oxford-street, London, W.

APPREHENSIVE NERVOUSNESS.

Debility, Rheumatism, Gout, Sciatica, Torpid Liver, Kidney Disorders, and every form of weakness may be speedily cured by wearing

HARNESS' ELECTROPATHIC BELT.

It generates a mild continuous current of Electricity.

Produces no Shock or Discomfort whatever. Testimonials, Pamphlet and Advice free, personally or by letter.

Write at once to **Mr. C. B. Harness,** Consulting Electrician, **MEDICAL BATTERY Co. Ltd.**

52, OXFORD ST. LONDON, W.

(Corner of Rathbone Place.)

SELLERS' NAPHTHOL SOAP

ENTIRELY SUPERSEDES
COAL TAR AND CARBOLIC SOAPS.

Is acknowledged to be the most practical and effective soap ever introduced. For Skin Affections and Toilet purposes it is eminently serviceable in producing a clear, smooth, and healthy condition of the skin and complexion.

Boxes of 3 Large Tablets, 1s. 1d., *by post from the Sole Maker,*

J. SELLERS, 57, Farringdon-road, London, E.C.,
And of all Chemists.

DOIGS' "Septicide" DROPS AND LINIMENT

KILL DISEASE IN EVERY FORM.

UNPARALLELED for Bronchitis, Diphtheria, Chest, Liver, and Kidney Complaints, Diarrhœa, Constipation Congestions, Rheumatism, Gout, Inflammations, Children's and Female Ailments, Fevers, Ulcers, Old Sores, Blood and Skin Diseases, Wounds, Pains, Bruises, &c., &c.

Of all Chemists, 1s. 1½d. per bottle; or post paid of the Proprietor, ALEXANDER DOIG, 7, St. Paul's Churchyard, London, E.C. Demonstrations Free from 10 to 4 daily.

C. CHARLES.—You suffer from Barber's Itch. Try the following ointment:—Hydrarg. ammoniat., ten grains; Bismuth. subnit., one drachm; Liq. carbonis deterg., one drachm; lanolin, six drachms. Mix. To be applied night and morning.

JOHN L. CHESTER.—Follow the advice given to "C. C. C." in HEALTH, No. 295, and write again in a month or so if no improvement in the hair has taken place.

AMPHIOXUS.—1. Wash your head once or twice a week with tepid water and Bayley's Spermaceti Soap, and rub into the irritated parts, after the head is dry, a little glycerine of borax. 2. For heartburn, avoid acid foods, much sugar, cheese, and pastry, and take a Vichy Pastille after your food regularly. The Soda and Mint Tabloids (Burroughs, Wellcome & Co.'s) are also excellent preparations for relieving acidity.

STOP THAT COUGH

BEFORE IT REACHES THE LUNGS
By taking a small Bottle of

SCOTT'S EMULSION

IT WILL SURELY CURE YOUR COUGH AT ONCE,

and, unlike ordinary cough remedies, will strengthen and build up your system.

SCOTT'S EMULSION is a skilful combination of Cod Liver Oil with Hypophosphites, and the potency of these two tried and unequalled remedies has been increased threefold by their ingenious combination with Glycerine into this very palatable Emulsion.

SCOTT'S EMULSION will cure Consumption in its earlier stages without fail, and will surely relieve in the later stages and greatly prolong life.

FOR DELICATE, SICKLY CHILDREN, AND FOR EMACIATION,

it will increase flesh and strength when all other remedies have failed.

SCOTT'S EMULSION of Cod Liver Oil with Hypophosphites is entirely deprived of the disagreeable taste of plain Cod Liver Oil and is much more effective.

Physicians prescribe it in preference to the plain oil, having seen its remarkable curative effects.

All Chemists, at 2s. 6d. and 4s. 6d.

MILK IN POWDER!

UNSWEETENED OR SWEETENED.

PREPARED BY

THE SWISS MILK CO.,

ST. GAUL, SWITZERLAND.

THE CHEAPEST, PUREST, AND MOST NUTRITIOUS
Of ALL similar productions.

THE LANCET says:—"A very interesting and valuable preparation."

BRITISH MEDICAL says:—The Preparation is sure to be appreciated."

THE MEDICAL PRESS says:—"A milk which is with difficulty distinguished from fresh cow's milk."

HEALTH says:—"A milk which cannot but commend itself to everyone who can enjoy pure, rich milk."

CARL LAWINSKI, 50, Mark-lane, LONDON, E.C.

Telegraphic Address—"LAWINSKI, LONDON."

FOR MUSCULAR & BRAIN DEVELOPMENT

There is nothing like activity, aided by

Scott's Wheatmeal

Which stands unrivalled for Brown Bread, Porridge, & Biscuits.

The above is regularly used and recommended by Sir Henry Thompson, Professor Mayor, of St. John's College, Cambridge, says: "Mr. Scott has supplied me for some months with Whole Wheatmeal, at most reasonable rates. The Meal is very palatable, and, I believe, perfectly pure and genuine" Present price—1/8 per stone of 14lb., sent out in 28lb., 70lb., and 140lb. bags. Wholesale prices quoted.

Address:—R. M. SCOTT, GREAT BARTON, SUFFOLK.

TRADE GREAT BARTON MARK

Wine Essences — MASON'S — Non Intoxicating Beer

These Essences produce in a few minutes a delicious temperance wine or cordial. Ginger, Orange, Raspberry, Black Currant, &c.

One tablespoonful of Mason's Extract of Herbs makes one gallon of splendid beer. Refreshing and non-intoxicating.

A Sample Bottle of either Essence or Extract sent on receipt of 9 stamps, or a Bottle of each for 15 stamps.

NEWBALL & MASON, NOTTINGHAM. — Agents Wanted.

ESTABLISHED 1825.

NEAVE'S FOOD

FOR INFANTS, INVALIDS, AND THE AGED.

BEST AND CHEAPEST.

SODEN MINERAL PASTILLES.

TRADE MARK. FOR THROAT IRRITATION COUGHS & COLDS. SPECIALLY RECOMMENDED BY

"I regard them as extremely valuable in *obstinate Catarrhal affections of the Throat.* "MORELL MACKENZIE, M.D."

"LORD KEANE has taken the Soden Mineral Pastilles when suffering from Catarrh of the Stomach. They *completely* cured him, and he can recommend them as the *best Lozenge* for *Coughs, Bronchitis,* and *Catarrh of the Stomach.*"

Of all Chemists at 1s. 1½d., or for 15 Stamps, from 10, DYERS'-BUILDINGS, HOLBORN.

"19, HARLEY STREET.

Sir Morell Mackenzie

TRADE MARK. FOR BRONCHITIS ASTHMA & CATARRHAL AFFECTIONS. WHOSE TESTIMONIAL IS WITH EACH BOX.

THE FOURTH EDITION NOW READY.

A

LECTURE TO YOUNG MEN

ON

"Purity of Life and the Preservation of Health."

BY A GRADUATE.

A complete Refutation of Quackery and a safe and reliable Guide, from the Medical standpoint, to all Young Men. Every Youth should read this pamphlet as a guide to the safe conduct of life in a moral and physical sense.

PRICE ONE SHILLING, or post-free 1s. 1d., from

HENRY RENSHAW, MEDICAL PUBLISHER, 356, STRAND, LONDON, W.C.

A WONDERFUL MEDICINE.

BEECHAM'S PILLS

BEECHAM'S PATENT PILLS. ST. HELENS LANCASHIRE

ARE universally admitted to be worth a Guinea a Box for Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fullness and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy and Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c. The first dose will give relief in twenty minutes.

Every sufferer is earnestly invited to try one box of these Pills and they will be acknowledged to be

WORTH A GUINEA A BOX.

For females of all ages these Pills are invaluable, as a few doses of them carry off all humours, and bring about all that is required. No female should be without them. There is no medicine to be found equal to Beecham's Pills for removing any obstruction or irregularity of the system. If taken according to the directions given with each box they will soon restore females of all ages to sound and robust health. This has been proved by thousands who have tried them, and found the benefits which are ensured by their use.

For a Weak Stomach, Impaired Digestion, and all Disorders of the Liver, they act like magic, and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long lost complexion, bring back the keen edge of appetite, and arouse into action with the rosebud of health the whole physical energy of the human frame. These are FACTS testified continually by members of all classes of society; and one of the best guarantees to the Nervous and Debilitated is, BEECHAM'S PILLS *have the Largest Sale of any Patent Medicine in the world.*

Prepared only and Sold Wholesale and Retail by the proprietor, THOMAS BEECHAM, St. Helens, Lancashire, in boxes at 1s. 1½d. and 2s. 9d. each.

Sold by all Druggists and Patent Medicine Dealers everywhere.

N.B.—Full directions are given with each box.

Order "HEALTH" from your Newsagent.

TERMS OF SUBSCRIPTION.

Yearly, including home postage, postage to the Continent, Canada, or the United States, 10s. 10d.; Six Months, 5s. 5d.; Three Months, 2s. 8¼d.

Cheques and Post Office Orders to be made payable to the Publisher, A. P. WATT.

ONE BOX

OF

CLARKE'S B41 PILLS

IS WARRANTED TO CURE

All ailments of the Urinary Organs (acquired or constitutional), Gravel, and Pains in the Back.

GUARANTEED FREE FROM MERCURY.

Sold in Boxes, 4s. 6d each, by all Chemists and Patent Medicine Vendors throughout the World; or sent to any address for sixty stamps by the Makers,

THE LINCOLN AND MIDLAND COUNTIES DRUG COMPANY, LINCOLN.

Wholesale Agents: BARCLAY & SONS, London, and all the Wholesale Houses.

VAN HOUTEN'S

PURE soluble COCOA

Best and goes farthest.

Made INSTANTLY.

Very strong and nutritious, THIS Cocoa is Cheaper and more satisfying than tea.

Easily digested by the most delicate.

THE BRITISH MEDICAL JOURNAL:—"*Admirable*"—"*flavor perfect and* **so pure** *and well prepared*"—"may with great advantage be largely used in *public institutions* as well as in *private families.*"

THE LANCET:—"*Delicate aroma*"—"*pure and unmixed*"—"*goes a long way* and *is really cheaper* to use in the *end . .*"

Dr. HASSALL, THE EMINENT ANALYST:—". . From its **purity,** *strength* and *aroma* it *goes much further*"—"well suited for use in *hospitals* and other *public institutions.*"

HEALTH:—"*None* of the numerous cocoas yet *equalled this inventor's* in *solubility, agreeable taste* and *nutrit* *alities*—
—*It excels* in *all the c* *eristics* which elevate cocoa *to the first rank as a food*—
—*Its purity is beyond question*—
—*Once used always used*—"

Printed for the Proprietor by HENDERSON, RAIT, & SPALDING, at 3 and 5, Marylebone-lane, Oxford-street, in the Parish of Marylebone, in the County of Middlesex, and Published by ALEXANDER P. WATT, at No. 2, Paternoster-square, London, E.C.